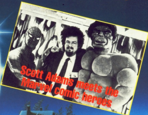
micro Adventurer

April 1984 75p



Scott Adams meets the Marvel comic heroes



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Artificial intelligence in adventures

Science fiction: tools for research

War games: simulation models

micro Adventurer

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Subscriptions
UK £10.00 for 12 issues, overseas surface (excluding US and Canada) £16 for 12 issues, US and Canada air-lifted US$33.95 for 12 issues.

Micro Adventurer is published monthly by Sunshine Books, Scot Press Ltd. Typesetting by In-Step Ltd, 77 Farringdon Road, London EC1. Printed by Eden Fisher (Southend) Ltd, Southend-on-Sea, Essex. Distributed by SM Distribution, London SW9 (telephone 01-274 8611, telex: 261643). ISSN 0265-4156. Registered at the Post Office as a newspaper.

SUNSHINE



EDITORIAL

PLAYING an adventure may take you into a brand new world — but it's often been pointed out that the concept itself is far from being new.

In fact, computer adventures have an honourable line of descent from — among others — role-playing games, although D and D fans have been heard to decry the new "bastard" offspring. As Gren Hatton shows in this issue such attacks make little sense. Even ignoring the doors that software adventures can open, micros can play a very useful part in role-playing games. Fantasy games can always be enriched by an element of realism, a point corroborated by John Fraser, who also draws attention to another line of descent — from science fiction.

But it's not enough to have convincing details or an impressive atmosphere, strategy too is important. This is obviously true of war games — yet another honourable ancestor covered here — but is no less so for adventures themselves. In fact the history of gaming must be nearly as long as the history of the human race. As Laurence Miller explains, war games themselves are directly descended from the planning done by military commanders before going to battle — and a propensity for fighting seems to be one of the more constant themes of history. Long established board games such as chess are in fact highly formalised war games.

So adventures have an honourable, if mixed, ancestry, plus some very interesting cousins. Along the way there have been some curious mixed marriages as well — as just one example this issue looks at the "union" between Scott Adams, one of the founding fathers of adventures, and the Marvel comic book heroes, Spiderman and the Hulk.

This kind of cross-fertilisation is close to the heart of the European Science Fiction Convention being held this Easter in Brighton. For instance SF author Harry Harrison, who is planning software to accompany some of his novels, is expected to be there along with other celebrated writers. Science fiction films on show include Bladerunner (whose title is a pale reflection of the book on which it is based, *Do Androids Dream of Electric Sheep?)*, and the Star Wars and Star Trek sagas. For diehard adventure fans there is a section dedicated to computer hardware and software. And dungeon masters need not feel neglected for sessions will be held covering science fiction and fantasy role-playing and board-gaming — the only problem with this type of mixed marriage is that the resulting hyphenated surnames can become very cumbersome.

LETTERS

Send your hints, successes, complaints and compliments to Letters Page, Micro Adventurer, 12-13 Little Newport St, London WC2R 3LD

Education software

YOUR editorial in the February issue presents an interesting idea. However, several people have anticipated you.

For the younger children, Troll's Tale and Dragon's Keep from Sierra On-Line provide an educational introduction to adventure gaming.

For older children the two Snooper Troops cases from Spinnaker Software have a variety of educational objectives while being excellent adventure games.

Even the medical student is catered for with Adventures In Flesh from Krell Software and Microbe from Synergistic Software, both being medically accurate.

Interested readers can read reviews of these Apple games in the December issue of Windfall and the February issue of Apple User.

Mia Casa,
Sandy Lane,
Crawley Down,
West Sussex.

All that glitters . . .

UNFORTUNATELY it is all too commond these days to buy a program that looks like a packet of gold on the outside and find a pebble inside. I wonder if others feel ripped off after having bought software? And does anyone else find that Valhalla crashes after having played it for a while? What's the problem?

I am able to give hints on Artic's adventures A and D and The Hobbit if anyone wants to drop me a line. Meanwhile, can anyone tell me how to get the key and what I do with the iced body in Ship of Doom, it's driving me crazy.

Peter Clements,
42 Allendale Rd,
Rainworth,
Notts.

Hobbit harangued

DURING the final months of 1983 I, like hundreds or thousands, were reading and hearing about the adventure of the year, The Hobbit.

I have been fascinated by adventure games ever since a micro computer came into my home, having enjoyed many hours of fun and frustration while adventuring. Now it happened that a Christmas bonus came my way so I parted with £14.95 for a copy of the famous Hobbit adventure.

Some weeks have now passed since that first loading. I don't wish to spoil this adventure for others but it takes only four moves to get out of the Goblin's Dungeon to the ring; the quickest I have ever managed to accomplish this feat is 36. Yes 36 attempts, approx: 40 minutes real time to make just four moves, every time I move out of the dungeon a goblin comes and puts me in again one boring time after another.

It seems that because of this time-lapse style of game I am unable to kill the goblins before they catch me. My commands are not entered until the game has decided what it is going to do.

I eventually managed to find Gollum about five or six moves away from the ring but because of the goblins this took about 1½ hours to achieve and on our meeting his only aim is to take the ring from me. I was once or twice asked a riddle by Gollum but when I replied he just walked away.

It is with much regret that I conclude this is the most stupid, inane, boring adventure I have ever had the misfortune to play. It is either trying to be too clever or it just will not work on my BBC B computer.

I am disappointed with this program because I am sure it must work better on other computers. I hope someone attempting adventuring for the first time is not put off for life. I would be interested to learn whether others have experienced similar problems.

T. Swain,
31 Beechcroft Rd,
Oxford.

Favourite war game

I REALISE that you are dependent on advanced publicity from the software companies but some of the info on Dreadnaught (January) wasn't quite correct.

Once you have played each side once, both players have a good knowledge of each other's strong and weak ships.

I admit I am biased as I am a naval buff. The game is okay but could have been a lot better.

I can recommend Digital Integration's Fighter Pilot for the 48K Spectrum as a good simulation of modern air combat, even if it doesn't have air-to-air missiles nor SAM's. Stonkers by Imagine appears to have a bug that makes it crash every other game. I first thought it was my Spectrum but no, it's the programming.

This game uses joysticks well but suffers from not having any input from a wargamer. It's quite like the APX Eastern Front for the Atari.

I've been running a game of Diplomacy on Prestel since October 1983. It's a lot smoother than the postal based form of playing it and a turn can be GMed and sent out within an hour or two. Likewise all diploming via the players is via Mailbox on Prestel.

The problem in the future may be the levying of a change on every Mailbox message. The call connect times are okay and will be better when all local computers can handle the full Mailbox facilities.

Micro Adventurer was a pleasant surprise but it would be convenient if you put issue numbers on the cover so I knew how many copies I had missed. How do I get back copies?

Frank Dunn,
32 Gateacre Park Drive,
Woolton,
Liverpool.

THE FIRST issue of this magazine was published in October 1983. You can obtain back copies by writing to the UK address for Micro Adventurer printed on page three.

Offer of help

A FRIEND and I have finished the following adventures and would gladly help anyone who is stuck. Artic: Planet of Death, Inca Curse (1¼ hours) Ship of Doom, Espionage Island, Golden Apple. Scott Adams: Pirates Cove, Voodoo Castle, The Count. Quicksilva: Smugglers Cove. Melbourne House: The Hobbit. Level 9: Adventure Quest (most), Dungeon Adventure (half) Snowball

Simon Clark,
4 Lower Tail,
Carpenders Park,
Watford.



"I would be more than grateful if you could possibly recall how you found the golden key and escaped from the dragon's dungeon!"

Science fiction fans plan Easter gathering

BRITAIN will be host for the first time in its science fiction history to the European Science Fiction Conference over the four-day Easter weekend.

British science fiction and fantasy fans annually hold a convention to discuss, buy and sell material related to their hobby.

This year the convention combines with the European conference, which is held every two years. Organisers expect more than 1,500 people to attend the various conference lectures and seminars that will be held at the Brighton Metropole Hotel.

There will be four major guests of honour representing the science fiction and fantasy writers fraternity. They will come from the US, UK, France and Czechoslovakia.

The American author, Roger Zelazny, is best known for five novels in the Amber Series as well as Lord of Light.

Christopher Priest is one of the UKs young leading authors, best known for his books The Space Machine, The Invented World and The Affirmation. The French writer is Pierre Bardet, whose work is popular both in Europe and in the US. Works of the Czechoslovakian writer, Josef Nesvadba, include a collection of short stories called The Abominable Snowman.

A spokesman for the conference said that in addition to the guests of honour 150 writers, publishers, agents and illustrators would attend.

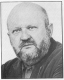
A dealers room would be set up where new and second-hand books, magazines, comics and other SF paraphernalia could be bought and sold. And a video room would show feature and television films.

"There will be two parallel programs running," the spokesman said. "It will include talks, lectures, discussions, videos and art exhibitions on all facets of European and British science fiction.

Entrance to the convention is £10 if the ticket is bought before hand or £12 at the door. The fee includes a hefty 80-page program outlining all the events and listing prominent guests.

Doors at the Brighton Metropole Hotel open to SF fans on Friday April 20 and close on Monday April 23.


Chris Priest


Josef Nesvadba


Roger Zelazny

NEWS DESK

If you think you've something newsworthy, call 01-437 4343 and let us know

Prisoner party fails in power bid

PRISONER fans should be encouraged by the show of solidarity at the Chesterfield by-election last month.

Seventeen after comrades rallied together at Chesterfield and registered their support for the Prisoner: I am not a Number candidate, Chris Hill.

Chris, 18, of Heathrow, formed the party shortly after The Prisoner tv series had finished screening.

By the early hours of the morning of Friday, March 1, Chris had won 17 votes, beating the Reclassify the Sun Newspaper as a Comic candidate by five votes and the Official Acne candidate by two.

Chris, who will begin a physics degree next year, said he formed the party to promote an appreciation of the tv series.

"There was one episode called Free for All, about parliamentary elections, and I thought that standing in this by-election would be a useful way to bring people's attention to the points The Prisoner was trying to make about government and society," Chris said.

In Free for All Number Six is elected as Number Two. The authorities brainwash him so that his policies comply with their wishes.

After he was elected to office and the effects of the drugs had worn off, Number Six told the villagers they were free to go, but none would leave.

One wonders if there is any significance to the 17 votes recorded at the Chesterfield by-election.

Could the results be a coded message from Number Six? Or perhaps there are 17 spokes on the smaller wheel of the pennyfarthing featured in the series (and once you've worked out the significance of this you'll know the identity of Number One). Or who is Number 17 and why did he let Tony Benn win the Chesterfield by-election?

Cabling adventures?

THE BRITISH Telecom sponsored Gamestar project will incorporate adventure, arcade and educational software in its programming service.

The Gamestar project was developed by Cable Interactive Services, a division of British Telecom, as a value-added service for cable television companies.

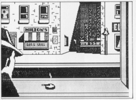
Gamestar allows the cable television companies the chance to add to their programming service by offering subscribing households the opportunity to use a continually updated library of adventure, educational and arcade games.

Micronet 800, the computer oriented viewdata and telesoftware service, will be the supplier for the Gamestar project.

A spokesman for Micronet said that although it was early days for the project it was expected to get off the ground in late spring.

For £9.95 a month a cable subscriber will receive a Spectrum 48K, a modem, a joystick and a choice of 20 games, which Rediffusion, the cable tv company, will update

Mugsy brings 'comic' relief to screen



MUGSY, an adventure-strategy based on a gangster, is the latest offering from Melbourne House.

The player assumes the role of Mugsy, the godfather of a gang of Chicago thieves and hit-men.

The gang is the toughest in Chicago and as Mugsy you have to control its members, organise bribes, weapons and protection rackets.

You must continually keep one eye over your shoulder because hit-men from other gangs are out to get you. One slip-up could mean a shoot out and perhaps the end of

Melbourne House describe Mugsy as an interactive computer comic strip. Commands are given in a Cagney-style slang and the characters replies are presented on the screen inside a balloon.

Melbourne House hope that Mugsy will be on sale some time this month. It was written by The Hobbit creator, Phillip Mitchell, Alfred Milgrom, and Clive Barrett.

Initially Mugsy will be available for the Spectrum, and then the Commodore 64. It will sell for £6.95.

Computer prize offered

THE FIRST four people to solve The Wrath of Magra, from Carnell Software, will win a Flan 64K computer.

Carnell launched the competition, which also offers a Philips colour TVs to each of the 20 runners-up, with the release of Magra on March 19.The adventure concludes a series of three games, which is set in a mythical third continent. It was preceded by Volcanic Dungeon and Black Crystal.

Magra is priced at £12.50, which includes the two manuals and the program.

Players can enter the competition by filling in the form contained in the small manual and sending it to Carnell. The company then post back the player's code number.

"To win a computer someone has to destroy Magra for all time," a spokesman said.

Starnet goes on trial

STARNET, the first computer moderated play-by-modem game on Prestel, has started with about 23 players on its trial run.

Starnet writer, Mike Singleton, said the game, now being played full-time, is designed for up to 1,000 players.

"Players will use a special response page especially designed for Starnet. Then we will process the responses into our computer system."

It had attracted 23 for its one-week trial period in early March and numbers are expected soon to reach 700.

Players must belong to Micronet and need a modem plus dedicated software to gain access to the parent system, Prestel.

Starnet players put their orders into Prestel and use it for accessing information about the state of the galaxy, the consequences of their moves and those of other players.

A Starnet turn is 10 pence.

Team needs manager

IN A new simulation for the Commodore 64 you play the manager of a football club.

It is your job to organise the best possible team, make a swoop into the transfer market, spy on another club and send the team out to do their best each Saturday.

For successful clubs the rewards are a place in the league championship, the FA Cup and the European Cup.

But you'll also have to risk relegation or dismantle a big-money side.

Marvel characters enter new age

THE MAJOR news for adventure fans from the LET International Trade Show held at the Heathrow Penta Hotel, in February was the release next month of The Hulk from Adventure International.

The company's founder, Scott Adams, flew from Florida, in the US, to attend the last two days of the show.

Publicising the iminent launching of AI software based on the Marvel comic strip characters, were Spiderman and The Hulk, at various show stands.

The Hulk will be launched on May 1 simultaneously in the US, Canada, Australia, France, Germany and the UK. Other Marvel characters to be soon found on computer software packages include Spiderman, the Fantastic Four and Captain America.

Other companies planning new releases are Beyond, with Lords of Midnight for the Spectrum 48K.

It is a graphic adventure, which Beyond describe as the world's first epic game. They hope it will be the first in a series of games that will begin a new genre in adventuring.

Lords of Midnight was written by Starnet programmer Mike Singleton. He employs a graphic technique in the game called landscaping. This means that landscape unfolds as you move through the land of Midnight. Each of the 32,000 locations were drawn from the player's perspective.

Richard Shepherd representatives at the show said they expected a Commodore 64 version of Super Spy and Urban Upstart to be ready soon. Digital Fantasia have a new game on the market called Waxworks

The game is set in a deserted waxworks museum where you are trapped. During your escape you have to fight Jaws, the shark, and dodge the arrows of Robin Hood.

VCR to be won

INCENTIVE Software Ltd have launched a competition to find Britain's best adventurer.

The prize will be a £400 video cassette recorder.

The object of the competition is to complete a sentence, which is divided into three parts. A section of the sentence revealed successively in each part of the Ket Trilogy.

The first person to complete the sentence, which is possible only if 100% is scored in each game, wins the VCR.

ALLA

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MA.4

How a hobbit's mind works

***Noel Williams** examines the advantages of artificial intelligence in adventure games*

OWNERS OF The Hobbit or the excellent Valhalla will know what a difference even rudimentary artificial intelligence routines make to an adventure.

These two games seem to be a generation beyond the majority of adventures and, judging by their popularity, represent the direction that adventures are likely to go in the near future.

They are liked because of their first-class graphics and of the degree of non-random variation which is built into the games.

The Hobbit just would not be the same if boring old Thorin did not sit down occasionally to groan about gold or if Gandalf did not take it into his head to wander off at crucial moments.

However the behaviour of these characters at times seems capricious. They may listen to you and do what you want or ignore you. Just like real people, of course, but nevertheless it often seems random.

Persuasion

In Valhalla, on the other hand, though characters do wander in and out, they interact in a reasonably believable way.

Not only that but they do so without any intervention from the player. In fact you can play Valhalla without ever moving your own character, you just sit back and let the other characters get on with it.

In both games you cannot solve the problems without help from the characters, but it is not just a question of finding the right pair of words to make them respond. You must behave properly, speak to them in a suitable form, or persuade them to act. In The Hobbit much of this speech can be done in a language pretty close to English.

All of this involves artificial intelligence of one kind or another. Adventures have always had a close link with AI because much of the early developments on mainframes were by psychologists and linguists trying to simulate human behaviour.

AI is mainly concerned with investigating the nature of human intelligence (and other behaviour) by discovering what would be involved in making a machine behave in a similar way.

There is no need to debate whether the resultant machines/programs are actually intelligent or not. All we need to believe is that the programs are something like some aspects of human intelligence.

For example, a great deal of academic work has been devoted to writing programs which play excellent chess. This is not because people wanted chess computers but because it was thought that getting a program to play chess well would show how a human being played the game.

It was assumed that chess was one of the most complex of human intellectual activities; a great deal would be learned about human intelligence.

But little has been learned about human intelligence from chess programs, though a great deal has been learned about gameplay, the nature of chess, systems design and writing programs.

The result has been chess programs that are consistently as good as the best club players and some which occasionally beat chess masters.

Similar successes have been made with other abstract games. Programmers have examined the structure of the game, examined the human behaviour that goes with it (such as decision making and problem solving) and written programs that do the same job.

If you think about it for a little while you'll see that an adventure game can be dissected in exactly the same way, but from a slightly different point of view.

Essentially, an adventure game is a simulation of certain kinds of human behaviour. It is a simulation which tries to create a more or less believable world which, though it may be unreal, contains many of the rules of normal human behaviour.



Adventures usually use English as the input and output language. They involve solving problems and making decisions, conflict and other kinds of interaction with creatures, and they may have creatures with their own personalities.

Most of the AI in adventures is to do with the use of language or the treatment of personality. The better the AI in such a game the closer input and output should be to real English, the less random the output, the more creatures behave realistically, the more sensitive they are to player's actions, the more they can act independently of the player and the more varied the game will be.

AI in games is thus an attempt to get an interesting balance between the total randomness of some dungeon-and-dragon-type adventures and the constant nature of some of the fixed-structured text adventures.

Events in the adventure should not be purely random or fixed. They should depend in a logical and realistic way on the actions of the player.

For them to be as close as possible to their real equivalents the program has to respond intelligently to complex input and the characters must behave intelligently.

How is this done? To answer this completely would take a book or two, but the broad outlines are simple. Let's take language first.

The language in an adventure is probably the most important aspect after the structure of the game. Players like programs with large vocabularies, sensitivity to different kinds of input and with imaginative and interesting output.

From the programming point of view there are thus three broad problems. One is designing an input routine which can analyse English accurately and send control to appropriate routines. The second is storing a great deal of text and being able to access it quickly. And the third is being able to create output which is interestingly related to the input.

The second problem, that of storage and access, is not strictly speaking the concern of AI. But you'll find that on micros, almost every time a program comes along that involves AI in some form data compaction, memory-saving and storage methods become important considerations.

This is one reason why the Spectrum has been in the forefront of adventure development rather than, say, the BBC. It has more RAM available to the user so more text can be stored and more flexible processing routines can be created.

As mass storage becomes cheaper with Sinclair's microdrive and the reduction in disk drive prices there will probably be an increase in games like the famous Zork which uses disk storage to compensate for lack of RAM. As these are produced there will be a corresponding increase in the flexibility of text routines and the AI built into them.

Flexible routines

In the next few months we will probably also see 16 bit micros within the price range of the average micro user, such as the recently announced Sinclair QL. As such micros will probably have at least 128K RAM as standard they will also cause an interesting series of developments in intelligent games.

For the present we are limited to 48K or less. The AI that goes into games is likely to remain somewhat primitive. The principles of much interesting AI are well understood but micros generally do not have the capacity to make them worth implementing.

For example enough is known about language for parsers (programs that decode the structure of an input sentence) to exist which can interpret about 85% of English sentences. No more the boring LOOK SWORD or DRINK BOTTLE. But the system that does this at IBM uses over 700K so even 16 bit micros are unlikely to match it. But the principles built into this system can be adapted to make much more flexible input routines available for micros.



For example normal text input consists of a verb plus a noun. The verb is an action the player wishes to carry out and the noun is the thing that he wants to act upon. HIT GOBLIN is an example.

There are a whole class of normal acts which it is very difficult to describe in this way, those in which some kind of instrument is used to carry out the action, such as HIT GOBLIN WITH ROCK. If you have a language system that recognises with as meaning use the second object mentioned to act on the first object you have not only created a much more useful input system but you have extended the vocabulary of the program without adding any words to it.

Every noun is potentially two words rather than one — it means something which can be acted on and something that can be used to act on another noun. So HIT SWORD WITH BOTTLE and HIT BOTTLE WITH SWORD can have different results. By adding one new input rule to your program you have doubled the intelligence of the program.

There are a large number of such rules, some of which are more useful than others. In all cases a little word, such as with acts as a signal that what follows it is to be treated in a special way.

In a similar way one can make output routines which create sentences rather than simply printing literal strings. Instead of printing the same message every time the player discovers a new object (you find an x), control can be passed to Create Output routine which uses some simples rules of grammar to put together a different description.

Alternatively the routine can create its output in a way that depends on the current status of the player. For example if his lamp has just been lit it might say 'You see about 20 brightly shining jewels, glimmering with different coloured lights.' But if the lamp was about to go out the same vocabulary could be used to say 'A coloured light glimmers about you.'

For both text input and output the principle is:

- Discover a rule of grammar.
- Encode that rule as a routine.
- Flag all words which can be used by that rule.
- Write routines which are called by the flags and alter program variables accordingly.

In other words a parser is a piece of program encoding some of the grammar of English in such a way that other program variables can be altered if that rule is used. The precise alteration of the variables will depend on the words which are used when that routine is called.

For example the rule 'with' means noun2 verbs noun1 — with means bottle hits sword, implies that bottle and sword must have corresponding variables that signify breakability.

So to have meaningful but creative text we need to look-up tables of the relevant qualities of each of the possible nouns. If, for example, each noun has a code for how easy it is to break, another for how easy it is to burn, another for how heavy it is, another for how bulky it is and another for whether it can be used as a container or not, a sentence such as, "Drop the anvil on the barrel and catch the beer in the vase, then pour the beer on the burning carpet" can be decoded in a sensible way.

Idiosyncracies

Of course this series of events could be found in one of the current generation of adventures, but if it was it would either be the only correct solution to the problem, or it would not work at all.

With some degree of intelligence in a program different solutions can be found, for the same problem. For example, "Carry barrel to carpet and drop it" or "Break vase on anvil then open barrel with shard and carry carpet to pool of beer" might all be possible solutions, and all could be decoded by the same routines, not by a different routine for each command in each situation.

This shows how intelligence can also be given to characters in adventures. Just as the player is essentially a file consisting of a set of variables (either the objects he or she currently has or the current values of his strength, dexterity) so we can set up files or arrays which represent each character in the adventure.

Normally such characters are either a set of combat statistics or a subroutine for a limited kind of behaviour.

Intelligent characters however have additional data encoding their personal tendencies. Having a personality of a particular kind does not usually mean that you always do the same thing; only that you tend to do that thing. So the personality of a character can be represented as a series of probabilities.

Let's set up a typical character, Orville the Orc. How gullible is he? He is likely to be duped 40% of the time. How greedy? Well, he is 65% likely to want the player's treasure. How lazy? He is unlikely to move from his bed 95% of the time. How friendly? He is neutral to most people, ie 50%. How clever? He can only solve 2% of The Hobbit.

Now if a player comes along and tries to get past Orville he could offer him treasure and would probably have a 65% chance of success because of Orville's greed. But if he does this he would lose his treasure.

Instead he could offer the worthless brass dandelion and pretend it is The Fabled Ninth Treasure of Moria. There is only a 2% chance that Orville will wonder what is happening; then there is a 40% chance that he will be fooled by the offer; and finally the same 65% chance that he will accept it.

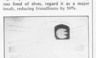
Obviously this is more risky than the first alternative, but if it fails no treasure has been lost.

The decisions for the player here are much more complex and interesting than in a straightforward "Give me your gold or else" encounter. But we do not have to leave it there. Because we have a flexible language we can build conversation into the exchange.

Suppose that the adventure's vocabulary has a list of adjectives such as marvellous, fantastic, fair, excellent, antique, elven and battered. Each of these can be held in a table with a value representing its effect on gullibility and greed.

If the player says "This is a marvellous antique" then Orville's gullibility may go up by 10% a his greed by 5%. But if he says "Would you like this battered dandelion" it might go down by the same amount.

Similarly for most characters elven would be an adjective indicating the highest possible value but orcs, not being too fond of elves, regard it as a major insult, reducing friendliness by 50%.



You'll remember that Orville's friendliness was only 50% to start with, so if the player tries "Seeing as it's you my friend I'm prepared to part with this fantastic elven artefact", though Orville's gullibility increases so does his rage.

By combining tables for languages with tables for objects and monsters, each table consisting of interactive variables, we can build up a complex set of interrelations with no adventure plot.

Noel Williams is author of "Invent and write games for the Spectrum" and "Intelligent games for the Electron", both published by McGraw-Hill (UK). □

Scott Adams: the fun and games man

***Carmel Anderson** talks to the father of micro adventure games, Scott Adams*

SCOTT ADAMS' romance with computers began at 17 in a high school maths class.

Ahead of its time for the 1960s his school invested in an IBM 360 and terminal for its mathematics department and for Scott it was the beginning of a life-long romance. "The terminal virtually became mine," he reminisces. "I fell in love with it and from then on I knew exactly what I wanted to do — work with computers."

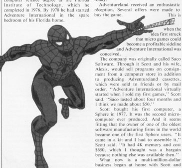
His school days with computers were spent playing games on the IBM — noughts and crosses and learning how to write games, unwittingly setting the scene for things to come. Step two in building a multi-million dollar computer games empire for Scott was embarking on a computer science degree at the Florida Institute of Technology, which he completed in 1976. By 1978 he had started Adventure International in the spare bedroom of his Florida home.

After graduation, Scott went to work for Strombourg-Carlson making computerised telephone switches. An unexciting job for a computer games buff you might think, but there was method in his madness. At Strombourg Scott got to play with mainframe computers in his spare time. It was here that he first played Adventures by Crowther and Woods.

He was so impressed he wanted his friends to see it, but they were not permitted to enter the Strombourg offices. So Scott wrote an adventure for the TRS 80 Model I.

He called it Adventureland and it is believed to be the first adventure written for a microcomputer. "It took about a week to get something workable," Scott said, "and a year to get it to what it is today."

Adventureland received an enthusiastic reception. Several offers were made to buy the game. This is when the idea first struck that micro games could become a profitable sideline and Adventure International was conceived.



The company was originally called Saco Software. Through it Scott and his wife, Alexis, would sell programs on consignment from a computer store in addition to producing Adventureland cassettes, which were sold to friends or by mail order. "Adventure International virtually started when I sold my first games," Scott said. "Saco lasted about four months and I think we made about $50."

Scott bought his first computer, a Sphere in 1977. It was the second microcomputer ever produced. And it seems fitting that the owner of one of the oldest software manufacturing firms in the world became one of the first Sphere users. "It came in a kit and I had to assemble it," Scott said. "It had 4K memory and cost $650, which I thought was a bargain because nothing else was available then."

What now is a multi-million-dollar business began at home with Scott and Alexis producing small quantities of Adventureland cassettes. After a year dealers showed an interest in the business.



Scott Adams — on friendly terms with Spiderman

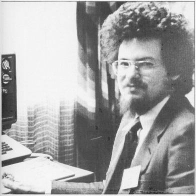
The first Adventureland cassettes were crudely presented. They were bereft of packaging and labels and were accompanied only by simple, typed instructions. The dealers wishing to sell the game urged Scott and Alexis to improve its presentation.

"They told us it was a great game and that they wanted to sell it, but said we needed packaging," Scott recalled. "We said, 'it's a great game, why do we need packaging?' The company replied: 'Trust us, you need packaging.'

"Our first packages were plastic bags that were made to line baby bottles. They were sold in the quantities we needed and were just the right size for the cassettes. We folded a business card over the top of the bag, stapled it together and sent it to the dealers. And it did improve the sales."

In the years between 1978 and the present, the success of Adventure International has meant six moves, one a year, into a variety of dwellings from the humble to the bizarre. The most original building was a geodesic dome.

"It seemed like an interesting thing to do. State of the art technology so state of the art building," Scott said. The dome, which less than two years ago could



and the Hulk having just been taken in under the Adventure International umbrella

accommodate the entire company, now houses only the production facilities. The rest of the business is situated in 11,000 square feet of office space in a Florida residential area.

Alexis Adams runs the business side of Adventure International. According to Scott she has had a tremendous say in the direction of the company. Her influence is apparent in games designs too, having written most of Voodoo Castle and co-written Mystery Fun House.

Scott still writes most of the Adventure International games. His second and third adventures were written in 1979. Out of the 15 under his name Scott says that his favourite is usually the one he has just finished writing.

Writing games

"I enjoy both arcade and adventure games," he said. "Normally I don't play other people's adventures. I don't want to subconsciously steal their ideas. I used to play Space Invaders and Pacman when they first came out. I thought they'd both be winners. I used to like playing pinball so I guess it follows on from that. I seem to have the same taste as the general public."

While in England for the LET Show, held at the Heathrow Penta Hotel in February, Scott had a chance to try some of the micros popular in Britain. They included the Spectrum 48K, "impressive for the price", the Commodore, "nice to use" and a short session on the BBC.

When writing an adventure Scott first decides on a theme within a science fiction or fantasy context, such as magic, ghost towns, deserts or outer space. He then chooses which elements go into the adventure's environment and designs puzzles "to make it interesting".

Contradicting the advice given by UK experts to budding adventure writers, Scott doesn't draw a map of his fantasy land from which to work. He keeps all his ideas in his head until he writes them on the micro.

Scott has developed an aid to game writing known as an adventure creator language which he "uses for writing games the same way other people use Basic". It's not for sale.

As a game is being written and on completition play-testers try it out. The adventure then is either revised or approved. Adventure International uses the same system of evaluation for he freelance titles submitted.

A software reivew board picks the games. Their criteria are originality and suitability of the product for a mass market. "We look for games that are leading rather than following," Scott said.

He sees the future of Adventure International set firmly but not solely in games production. The company advertises 150 products in its catalogue. The programs range in price from £7.95, for an adventure, to $795 for an IBM integrated business package (available in the US).

His next project is the release of the Marvel comic series on software. The first game to hit the shops will be The Hulk, which will be launched simultaneously, on May 1, in the US, Canada, Australia, West Germany and the UK.

Adventure International have been given the exclusive rights for 10 years to all the Marvel characters and Scott obviously is excited about it. "It's perfect timing," he said. "Marvel comics have been known all over the world for years and so tie in well with the life of an adventure program."

Video disks

The company also produces a strategy game for beginners called War and a series of three role-playing games called Maces and Magic.

The popular adventure series has found its way into the classrooms as well as the lounge. Pirate Adventure has been used in elementary schools to teach children logic. Secret Mission was given to a management group of college students to solve. They had to buy resources such as computer time and hire consultants to work through the problems.

Scott believes that a player should expect to get about one to three months' worth of entertainment out of a game. "The minimum time someone should solve a game is one weekend," he said. "It's unusual but it does happen.

"The rule of thumb we use for price fixing is to compare a game to an equivalent form of entertainment, such as a film. Someone should expect to get a fair bit of playing out of a game for the price."

Scott thinks the next step in micro gaming could be towards video disks, but technology again is the restraining factor. "It won't take off until they can be produced cheaply." As with other aspects of micro computer gaming, imagination and technology are the only limits.□



New role for micros

Gren Hatton describes how micro computers can add realism to role-playing games

AS READERS of this are probably aware, a role-playing adventure game is essentially interactive.

It relies on the way in which each player responds to action by the other players. As a direct result, a high degree of realism is achieved in both the atmosphere of the game and the detail of play.

There are many different types of game, and in each case the action can be of the hack-and-sly or solve-the-riddle variety or, more commonly, a mixture of the two.

The appeal of the game probably lies in the blend of a realistic amount of randomness and a set of defined rules. But it is the essential concept of a moderator or dungeon master, who acts as a referee, which undoubtedly gives the game its appeal.

Then, of course, there is the use of table-top game aids, such as lead figures, floor plans, scoresheets and copies of spells, which will fire a player's imagination.

With all this in mind, what then is the right way to use a micro in the playing of RPG's?

Impartial mind

Present day home computers are now powerful enough, either in speed or capacity, to carry out the complete adventure with sufficient realism. The result tends to be at best a game which briefly captures the imagination and at worst a repetitive, unrealistic dialogue between one player and a machine, carried on in kindergarten English.

This serves only to frustrate a player use to a more realistic game. The biggest drawback here is the loss of the dungeon master who provides an inventive but impartial human mind as moderator of the game.

Basically, the micro can either be used as the complete adventure module in itself or as a game aid such as automatic dice or an electronic scoresheet. But to use the micro this way is a waste of its potential.

The solution is to combine the best features of table-top RPGing, their realism and ability, to tax the players' imaginations, and the merits of micro's speed, accuracy and ability to generate random responses.

As a first step, forget the frills, such as sounds and fancy graphics. Let us examine whether a straight text-based system can be designed for use as a game aid rather than a game substitute.

As a vehicle for our discussion, we will consider a medieval Lortd-of-the-Rings game, although the principles I will set out are just as valid for space, gangster or other adventure games.

There are several distinct stages in any RPG, which can be summarised as follows:

- Creating the characters, choosing names, deciding on their various attributes (strength, intelligence), spells, initial value of cash-on-hand, purchase of armour, weapons and equipment.
- Gathering together with other players at an agreed starting point after absorbing background information and various rumours that will provide an incentive to start the adventure.
- Journeying from the start to a defined battleground or region (suggested by the pointers and clues) where the specified action is to unfold, be it searching for treasure, rescuing a hostage or killing an evil being.
- The specified action on the defined battleground; some see this as merely an episode in the larger and more continuous game of life.
- The return, following victory or defeat, which may be another complete adventure in itself.
- Once back at home, the business of stocktaking takes place, including sharing out the treasure, disposing of goods found en route, paying-off hired assistants, repairing a damaged kit, curing wounds, relearning spells — the list is virtually endless.

Of course many experienced DM's will blend the final point with the first two so skillfully that the join never shows, and presto you are in the middle of another quest before you can get your breath back from the last one.

In this respect, as in many others, the human moderator or DM is an essential factor in achieving an absorbing and realistic game.

At this point, the task seems daunting, but don't despair. The micro-computer has a part to play. The secret is to look for jobs which can be isolated and given to it so that it earns its keep without reducing the spontaneous and interactive aspects of the game.

Character generation

Here are some suggestions for independent jobs that can be parcelled out at each stage of the game.

The generation of characters exploits the micro's best attributes. This produces personalities for an adventure which have at random. It automatically rejects any weak characters which fall short of a minimum criterion of usefulness, grades the rest (fighter, elf, thief) and assigns bonus attributes such as extra protection from being hit due to high dexterity.

The micro can easily save the worthwhile results in a matrix, or array and it avoids a great deal of the tedium of this preparatory job without losing any of the inherent interest in the outcome of each

```
10 LET d=INT(RND*4)
20 IF d=0 THEN PRINT "In the marketplace"
30 IF d=1 THEN PRINT "At the Inn of the Angel's Face"
40 IF d2 THEN PRINT "While loitering about near the docks"
50 IF d=3 THEN PRINT "During the morning"
60 LET d=INT(RND*4)
70 IF d=0 THEN PRINT "you pick up a scrap of paper which
someone has dropped, and learn that"
80 IF d=1 THEN PRINT "you overhear two stragne men talking. It
seems that
90 IF d=2 THEN PRINT "you talk to an old blind beggar. He tells
you that"
100 IF d=3 THEN PRINT "you meet an old friend. During the
conversation he mentions that"
110 LET d=INT(RND*4)
120 IF d=0 THEN PRINT "a strange column of smoke was seen over
the Eastern Woods three days ago"
130 IF d=1 THEN PRINT "there is a huge troll at the Western bridge.
You must pacify it with a gift of raw meat"
140 IF d=2 THEN PRINT "Odin Forkbeard has found a big blue gem-
stone, which has strange magic powers"
150 IF d=3 THEN PRINT "there is a legend that a huge treasure lies
"under the Serpent's Rock" — but no-one knows where that is!"
```

The Quill

48K Spectrum



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The Quill is a major new utility written in machine code which allows even the novice programmer to produce high-speed machine code adventures of superior quality to many available at the moment without any knowledge of machine code whatsoever.
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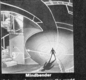
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fall of the dice. This produces a worthwhile result, much faster than the traditional manual method.

It is easy for rumours, an important initial job to be botched by the DM, who simply says, "You, the elf, have heard rumours 1 and 6 on the introductory sheet; thief, you have heard rumours 2, 3 and 7 . . ." and so on.

This is a bald and uninteresting way of getting things started. It has two main drawbacks: everyone overhears the things which should be known by one player alone; it lacks realism.

But since it is by random chance that characters pick up the snippets of news and clues which start them in pursuit of a new quest, here is a job which is custom built for the micro.

Three sections

We answer the first criticism easily enough, since players can be sent one at a time to the computer so no dialogue can be overhead. To tackle the second we have to look for ways by which the computer can make itself appear more human.

This is not too difficult. We can write a program in three sections: A state where you collect the information. B state how the information is given to you. C state what the information is.

You may find youself in the market-place where you pick up a scrap of paper, and learn that a strange column of smoke was seen over the Eastern Woods three days ago.

For section A write down a numbe of different statements which all use the same format. For instance, in the marketplace; at the Inn of the Angel's Face; while loitering about near the docks; during the morning.

Now do the same for section B. You pick up a scrap of paper which someone has dropped, and overhear two strange men talking. It seems that you talk to an old blind beggar. He tells you that you meet an old friend. During the conversation he mentions that . . .

(Finally, list out your rumours and clues in the last section.) . . . a strange column of smoke was seen over the Eastern Woods three days ago; there is a huge troll at the Western bridge. You must pacify it with a gift of raw meat; Odin Forkbeard has found a big blue gemstone, which has strange magic powers; or that there is a legend that a huge treasure lies under the Serpent's Rock, but no-one knows where it is.

Now combine any of the statements in A with any in B and any in C, in that order. In each case we obtain a complete sentence. I will refer to this concept as a random phrase generator.

In the above example, you can see that there are 4×4×4=64 possible different combinations. Clearly we could add to each section, and with eight entries there would be 8×8×8=512 different sentence.

Using such a concept, information typical programming technique for the Spectrum is shown on the first page.

In the above program, only lines 120, 130, 140 and 150 would need to be changed by the DM between one adventure and the next. You can use this idea as a program in its own right, or build it in as a sub-routine in a larger program.

This article is too brief for me to go into detail here, but the principle, of a data map, is to hold a given territory (say the World of Greyhawk) as data references in a large three-dimensional array.

Two dimensions would be used to define the x and y co-ordinates of the position on the map, and these would be incremented by the player in answer to "which direction will you go next?" prompt via an INPUT command on the screen.

The third dimension of the array would store a code of (say) 20 digits, each from 0 to 9.

You could easily arrange to read this code two digits at a time, and thus for each x,y location produce a list of 10 numbers between 00 and 99.

If you have a sub-routine somewhere else in the program which holds a list of up to 99 keywords, you can use this list of numbers to write a 10-word descriptive sentence. The keyword list will make this clearer.

In this array listing, 15,23,04330504152-402533471, you find yourself at a location (x,y) = (15,23) on the map, which may run, say, from 1-30 in the x direction and from 1-30 in the y direction.

The description of this location would be a numeric string,0433050415240253347l.

The computer would have been instructed to read this string in pairs of digits as 04 33 05 04 15 24 02 53 34 71. After refering to the keyword list by means of a simple sub-routine, it would print this out as, a bridge over a little river where three paths meet.

Of course this sort of map-holding takes a lot of RAM store. The above example uses a (30,30,20) array, which requires most of the available capacity of the 48K Spectrum. But it is infinitely more efficient than storing all the words at each location.

Return home

In the heart of the quest the most likely task for the micro-computer is to assist in fighting the melees against dragons, enemy troops, aliens etc.

Its ability to calculate random numbers, evaluate whether a hit has been scored from a particular blow, calculate the damage caused and remember everyone's hit-points saves messing about with dice, paper and rubbers, and allows players to think more about strategy.

I have written a demonstration program, which my own playing group refers to as The Battler. It enables us to explore some of the possibilities of using the computer to fight melees.

The topic is only mentioned here so that I can build up in your minds the concept of a complimentary set of could be passed over in what appears to be a very realistic and chatty fashion. A computer-based game aids, each resident in a separate dedicated program.

00 and
01 to
02 where
03 through
04 a
05 over
06 in
07 the
.
:
10 wide
11 flat
12 narrow
13 shallow
14 big
15 little
.
:
22 hills
23 valley
24 river
25 ravine
.
:
32 pass
33 bridge
34 paths
.
:
50 some
51 one
52 two
53 three
.
:
71 meet
72 split
73 separate
and so on

The return home is another application for the map program mentioned above. Below are a number of possibilities for sub-routines which can be used inter-actively with the map routine. They are:

- The (random) danger of getting lost; obviously more likely if you have no map to carry with you, but equally possible if the map, which you do possess, turns out to have some mistakes in it.
- The (random) effect of changes in the weather; for example the need to seek shelter from a storm or the loss of bearings if it becomes foggy.
- The effect of day/night variation. This is not random and you need to add in a game-time clock as a sub-routine which can be updated each time the party decides to move on or rest.
- The slow progress you make when loaded with loot or when wounded. ▷

- The need to stop and rest at intervals.
- The need to eat and drink at intervals (and the penalty in hit-point damage if you fail to do so).
- The danger of meeting enemies, obviously greater in some areas of the map than others, but also subject to a certain amount of random chance.

Common theme

In any game, the moderator, or DM finds certain parts harder than others to manage. Disbanding and stocktaking after the adventure is one of them. I used to dread this stage of the game.

In easier stages, during a melee, for instance, everyone in the party generally working together towards a common aim, such as the defeat of the enemy who was attacking. The action may have been complex, but at least it had a common theme.

Or, for example, when on a journey the party generally moved as a group — camping, eating, sleeping, exploring and problem-solving all tended to be oranised as group activities. In these situations, the DM generally had only one line of thought to pursue, and the game proceeded smoothly.

However, towards the end of a quest the action can become quite fragmented. For instance, on returning to the base camp a party of five adventurers could find that: the cleric was wounded and had to go to his monastery to seek a cure; the magician had to go off secretly to relearn some spells, and collect some ingredients for his magic; the thief had to report to his Guildmaster. He also had a big heavy bag of treasure which he was carrying on behalf of the whole party.

The adventurers could also find the fighter staggering under the weight of a pile of weapons and armour plundered from dead enemies. It all has to be converted into money because the others want to share out the profits; or find the dwarf cross and tired. He thought that the thief was going to cheat them all. All he wants is to feed his mule, get his share of the money and go to an inn for a rest and a drink.

In this sort of situation the poor DM faces three distinct problems:

- To make sure that four of the players do not get bored while he is dealing with the fifth player in some lengthy discussion.
- To make sure that the other four players hear nothing at all of what is said to that fifth player at a time when he/she is supposedly acting solo. This point is particularly important: the realism of the game is increased a hundred-fold if the DM can get one player to report back to the others the results of some solo activity. This forces them to do some real acting.
- Stocktaking is difficult to do properly, with rewards and treasure being doled out, experience being totted up and players due for promotion suitably raised.

This last point again is easily mismanaged. It is quite unrealistic for the DM to say, "Ah yes, you third-level thief, you are now fourth level." Much better to have the thief tested by his guildmaster and found suitable for some rewards (such as a new set of thieves' tools, a reresher course in climbing sheer walls at the guild's expense.

As a result the guildmaster might find the thief to be an accomplished cutpurse and hands him a diploma with a list of new attributes.

At times like this every DM must wish for an assistant so that solo-action situations can be handled in parallel. Well, it is not too difficult to provide a solution.

I experimented with various approaches, and finally put together a sample program called Return to Thonger, which has been used in games to cater for many of the above possibilities.

Interactive game

The program provided a series of one-player interactive adventures in Thongor, a medieval town which as used as an operations base when adventuring.

Any readers interested in further information about this program should write to the author at Stoneleigh, Middle St, Kilsby, Rugby, Warwickshire, enclosing a large SAE. □

High score for Pinball

Simulation *Pinball* ***Micro*** *Dragon 32* ***Price*** *£8.00* ***Format*** *Cassette* ***Supplier*** *Microdeal, 41 Truro Rd, St Austell, Cornwall.*

I WAS very sceptical when Pinball thudded through my letterbox on the principle that no one would ever write a good simulation of a pinball machine, an opinion based on various experience of video pool, etc, so I loaded it in expecting the worst.

The tape loaded with no fuss, even with the tone control on my cassette player set low, which was quite impressive as this is usually enough to bring most software to it's knees.

After displaying the usual fancy opening-page-while-I-load-the-rest-of-the-prog routine, the program asks you which colour screen you wish to play on.

Take not this choice lightly! It is an irreversible decision, unless you want to re-load the tape.

Out of a choice of black, green and buff I found that buff was the least eye-straining. Then comes some more titles, a little burst of unrecognisable music and the game proper emerges an arcade-style pinball machine simulation.

Any pinball simulation has to make a choice between sticking to the playing area ratio of a real pinball machine, and having a game that only occupies the middle third of the screen, or filling the screen with playing area and praying that the general public will accept squareish pinball machines.

Microdeal have opted for the latter course. The overall size is slightly under square, and the actual playing area is pear shaped.

The ball itself moves in a fairly accurate manner, although I found that when moving really fast, the Dragon cannot plot every position that the ball passes through, and it sometimes disappears from view for a short time (although not often)..

SOFTWARE INVENTORY

What's on the way in the adventure world — if you have a new adventure, war game or real-life simulation which you are about to release send a copy and accompanying details to Software Inventory, Micro Adventurer, 12-13 Little Newport St, London WC2R 3LD



You are given five balls for each game.

The representation of the obstacles is so-so, but they do throw the ball off in a fairly good simulation. The movement of the ball is quite good, and the whole effect is not too unlike the real thing.

The skill level, which can be changed at the beginning of every game, selects different patterns of obstacles but as far as I could tell this was the only change to the game.

Flippers are provided at usual sort of place and are activated by pressing the 7 key or the fire button on the joystick.

Here we arrive at the only real grouse I have with the whole program. The one key activates both flippers, whereas, as any pinball wizard will tell you independent control of the flippers is essential.

The same key is also used to shoot the ball, making it a real one finger game.

I can't imagine that the difficulties in using three separate keys were insurmountable when the program was written. As it is, the game sometimes leaves you with not a lot to do.

In general, this game of 16K of machine code is probably the nearest anyone is going to get to an accurate simulation, within the confines of the 3:2 screen ratio of the computer.

The game is fairly fast when playing, and I would give Microdeal eight out of 10 for attempting what is, after all, a fairly difficult thing to simulate.

It makes a refreshing change from annihilating aliens or aimless adventuring, anyway.

SS

Wilf shot down in flames

Adventure *Wilfred the Hairy, Olaf the Hungry* ***Micro*** *Spectrum 48K* ***Price*** *£5.95* ***Format*** *Cassette* ***Supplier*** *Microbyte, 19 Worcester Close, Lichfield, Staffordshire.*

THIS IS a game with an amusing and intriguing title . . . . unfortunately that's about all it has going for it.

Wilf (for short) gained points for easy and reliable loading, but promptly lost them for demanding that I "Stop the tape" part way through so it could give me some badly spaced instructions, largely duplicating those on the photocopied sheet which accompanied the tape.

The colourful insert boasts "High resolution action graphics", and indeed the pot-bellied stick figures of Wilf and Olaf move smoothly, if excruciatingly slowly, around the screen.

The map though, is built out of low-res block capture either Europe and the enemy stronghold or all continents except Europe.

The first problem is working out which of the amorphous blotches is Europe. Next you manoeuvre your man (Olaf, in blue), using the cursor keys, to position flags marking your territorial gains, while Wilf, controlled by the computer, does the same.

Contact with the enemy causes loss of ammunition which must be replenished at the home castle, and random events can affect the ammo levels too.

Moving onto a green area allows you to sail over the sea in a jerky UDG boat. (Apparently sea-battles are possible, but despite playing for several hours none of Wilf's craft attacked me).

The idea is uninspiring and the execution is dismal. As well as the graphical shortcomings, control of movement is slow and awkward, you can sail the ship to a landlocked lake, the messages sometimes disappear before they can be read and have no relation to the state of play (hostile tribes can attack you while you are right outside your own castle, for example).

The game is boring in the extreme. The computer plays a cagey game and despite covering all continents with blue flags and even somehow turning Wilf blue as well I couldn't beat it.

The option to play another human would considerably enhance the interest, but even then I doubt this game would hold many adventurers' attention for long.

DD

Off to a good start

Adventure *Mountains of Ket* ***Micro*** *Spectrum 48K* ***Price*** *£5.50* ***Format*** *Cassette* ***Supplier*** *Incentive Software Ltd, 54 London St, Reading.*

WHAT WOULD you do with a crimson fish? My bet is that it's a red herring, but then maybe the goblin needs a herring aid?

I'm stuck in the middle of the Mountains of Ket. I'm desperate to get through ▷

◁ because on the other side are two more games in the trilogy allowing me to stop the vicious raids from over the mountains by gently but firmly disposing of King Vran Verusbel, leader of the cult of Mad Monks, and the high priestess Delphia.

I've a score of 58%, I've been in 48 different places, found umpteen helpful objects (and another umpteen which don't seem quite as helpful), fought villagers and orcs (and nearly won) but I just can't find the door to the other side.

This is a standard text adventure. It is not the most difficult I've played but it is very well designed. Expert adventures will probably find it a little too easy, but I've found it has exactly the right blend of Eureka! and frustration.

The further you go the harder it gets and it took me about 12 hours play to get to half way though.

Some of the puzzles have a nice originality, the text is quite humorous and, though there is none of the artificial intelligence of Valhalla or The Hobbit there are some clever little conversation routines.

Unusually, for the puzzle-type adventure there is also a combat option allowing you to fight almost every creature you meet. This is not, however, a very good idea.

The combat system is heavily weighted against the player and uses up energy very rapidly. And even if you win you'll probably find that you've killed the only solution to the next problem.

The game is well designed with no bugs that I could discover. Help messages generally do, if you think about them long enough, and there are several nice touches which make play just that bit more interesting, such as the user defined graphics identifying some objects, the number of different error messages, the cleverness of some clues and the SAVE function.

All in all an excellent introduction for novice adventurers, a challenge for those with some experience, and a pleasant couple of evenings for the expert.

So get started. You could win a video cassette recorder if you complete the trilogy. **NW**

Swapping dragons for Germans

Adventure *Wings of War*
Micro *Dragon 32* ***Price*** *7.95*
Format *Cassette* ***Supplier*** *Salamander Software, 17 Norfolk Rd, Brighton, Sussex.*

IF YOU'RE fed up with staggering around dungeons, battling with mythical creatures and playing endless adventures that all seem like a certain large cave game, then this is just what you need.

Written by the author of Franklins Tomb, Wings of War is a text adventure in which you play the role of Lt Roger Wilcox, parachuted into occupied France.

The aim of the game is to penetrate a German occupied chateau with the purpose of finding some blueprints and a prototype bomb, then you have to make your escape.

The first thing you notice is the neat screen layout. I don't know if this is typical of Salamander in general or just this author, but it wouldn't hurt a lot of games if they took a tip from this. You get five column/boxes, all marked with their purposes: location, obvious exits, inventory, moves and communication — no need to type in or even look.

After a couple of false starts I eventually got into the chateau, but not before I'd spent ages trying to lay my hands on a pass because no pass no entry, so this was essential. Once inside I found a bewildering array (no pun intended) of objects: glass busts, frogs, scrap aluminium, cushions. I won't go on, but suffice to say that getting the plans and the bomb isn't easy, and will keep anyone busy for some time.

While a novice adventurer will be able to tackle this, an experienced adventurer will find much to amuse him in the chateau. Devilish traps, devious red herrings and the



unusual background make the game clip along at a really good pace, making it a pleasure to play.

At the end — assuming you get that far — there is the promise of a sequel, which is appealing. I enjoyed this game, the combination of good screen layout, witty trilingual messages and action enough to satisfy the most jaded of adventurer's palates, will keep most gamers entertained for some time.

If you fancy a dangerous undercover mission in enemy occupied territory, buy this game, and if you don't then buy it anyway. **PD**

A maze to whet your appetite

Adventure *Fishy Business*
Micro *Dragon 32, BBC B, 48K Oric-1* ***Price*** *£9.95*
Format *Cassette* ***Supplier*** *Salamander Software, 17 Norfolk Rd, Brighton.*

FISHY Business is the third of a trilogy of adventure, the other two being Franklin's Tomb and Lost in Space, and all three feature Dan Diamond, who is a Salamander equivalent of Humphrey Bogart.

The program is self-running display loaded machine code. Salamander never goes overboard on their display loader pages, unlike for example Microdeal, whose opening pages would do justice to a Busby Berkley musical.

This is quite a long program, all of 30K of machine code. I didn't know you could get that much into a Dragon 32, but then Salamander never did flinch from the impossible.

After the opening page the text adventure unfolds on a formatted screen. What this means is that the screen is split into three independent sections. The top left section gives an account of what you



can see. The top right section gives a list of what you are carrying. The bottom five lines are used for input and computer response. This is quite a brilliant idea. It saves you typing LOOK and INVENTORY all the time.

The input is noun and verb, and also has a game save facility, which saves you having to type in the first 30 commands when you die.

As for the game, you wake up having just crashed your spacecraft on a desert island. The object is to find out who has sent for you, why, and then solve the problem. The first two objectives are easy. The third I haven't lived through to manage yet.

A word of warning: this game contains the meanest, evilest, most infuriating three-D underwater maze I have ever been lost in. What makes it worse is that there is no HELP facility. You can swim round and round for ever and when you resurface you are in the same place. There is a way out, but it is difficult to find. Obviously designed by a sadist, this is not for the faint hearted.

The rest of the game is not outstandingly spectacular, but it is certainly worth playing. There is a predisposition for red herrings and blue kippers, the meaning of which only becomes obvious towards the end.

There are a fair few useless objects, too. Since you are only allowed to carry six objects at a time, you have to plan what you carry well. There are secret passages, magic words, and an awful lot of legwork to do.

As text adventures go, this one is quite good. It has some evil bits and some deadly bits, and Humphrey Bogart would have loved every minute. **SS**

Backing down a one-way street

***Adventure** Urban Upstart* ***Micro** Spectrum 48K* ***Price** £6.50* ***Format** Cassette* ***Supplier** Richard Shephard Software, Elm House, 23-25 Elmshott Lane, Chippenham.*

SCARTHORPE is the sort of town where there is only one road in, and it's a one way street.

Ignoring this perfect tourist trap you have stumbled into the unpleasant town of Scarthorpe, from which you now find it difficult to leave. So at 3 am, when the streets are deserted you decide to make a break and escape.

This third generation adventure (text with pretty pictures) is well constructed and written. Obviously a lot of thought has gone into the planning stage. The streets in Scarthorpe are given immortal names such as Amputation Road.

The game is easy to map on squared paper once you leave the house, but do not let this fool you into thinking that the adventure is easy. Far from it, I have yet to escape from Scarthorpe although I know how I am going to do it.

The game has several quirks, one of the more interesting of which is that the time given by the program does not appear to follow the standard clock' system as three successive dials of the speaking clock (yes, there is a useable phone) returned the times of 3:45, 4:42 and 3:54 respectively. I found this every time I played the game.

One of the more commercial points of the game is the graphic representation of the location you are at. Every location is illustrated (even if some of the drawings are confusing) and the border changes colour to match the pictures. These remain in the graphic window at the top of the screen for the duration of your stay.

If my presumption that the game was written in machine code is correct then the reaction times are slow and the Look routine is ridiculously so.

The program, however, does allow you to enter up to 30 characters for your command. Commands can be strung by the use of the conjunction and but not &.

Most of the commands can be supplied to one letter and an object often does not have to be specified in the Take command. The vocabulary appears to be limited, even Get is not recognised, Take must be used.

I recommend Urban Upstart with reservation. The humour may not be appreciated by some people and the scenario is not pleasant.



Now I must return to the city streets, put on my Frank Sinatra records (this is a clue) and try to find a way out of the police station without going to the hospital. **JO**

Pool from all angles

***Simulation** Eight Ball* ***Micro** Dragon 32* ***Price** £8* ***Format** Cassette* ***Supplier** Microdeal, 41 Truro Rd, St Austell, Cornwall.*

THIS is an attempt to reproduce pool, a game which is gaining popularity in this country.

It comes from Amoco Software, the people behind Pinball.

Eight Ball, in my opinion, is a great improvement on Pinball. The pool simulation is an excellent game that is well written and should make a good part of any owner's collection.

The game auto runs, with the old, low-res title page, to give you the choice of colours black, buff or green. As is very often the case, black is a good choice here as defination is lost in the other modes. Full marks to Microdeal though, as the reset button on this game lets you rechoose the colour, a feature I have not found on any of their other games, most of which simply perform a cold start on depression of the reset button.

The game begins with player one placing the ball in the right-most quarter of the table to break. Having positioned the ball he or she must then select angle, spin and force.

The entire game is played with the joysticks, you select the angle by moving a cue around the outside the cueball until it is in the correct position.

The button is pressed and you position a spot on a larger ball at the top of the screen to determine the spin. The player then presses and holds the joystick button for a length of time proportional to the force he wishes to apply to the ball (from one to four).

Although this movement sounds complicated, it is in fact easy to master and allows a smooth, flowing game.



The program is not without faults. There is no score, just a winner and a loser. There is no graphic record of the pot order and the backspin appears to have a variable effect.

The balls move fast, smoothly and correctly. This is no mean feat when the maths involved is considered: First, the angles from the cushion have to be calculated using the second law of reflection. Second, the balls must transfer velocity to each other in elastic collision. Third, spin must be taken into account and must be transferred from ball to ball. All the maths must be done using addition, subtraction and multiplication of integers between 0 and 65536.

The sound is adequate if not particularly inspiring, but the feeling of satisfaction when you screw back into the perfect position for the eight ball is very gratifying.

To fans of pool and video pool I recommend this game whole-heartedly. To anyone else I would suggest you try it at your local computer shop to see if it is your type of game. You might find that it is just what you have been looking for. **JO**

Light cast on Dark secret

***Adventure** The Pen and the Dark* ***Micro** BBC 32K, Spectrum 48K* ***Price** £9.95* ***Format** Cassette* ***Supplier** Mosaic, Baffins Lane, Chichester, Sussex.*

"YOU'VE read the book — now play the game".

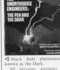
Like The Hobbit before it, this game is closely based on a previously written tale.

The tale is science-fiction, which is included in the booklet that accompanies the cassette. The story is The Pen and the Dark by Colin Kapp. It is one of a series featuring the Unorthodox Engineers.

The game instructions advise the player to read the first few pages of the story which sets the scene and reveals the object of the adventure. The remainder of the plot should only be read when the player is stuck.

The player assumes the identity of Fritz Van Noon, head of a team known as the Unorthodox Engineers.

You are set the task of solving the mystery surrounding the appearance on the planet Ithica of a strange ▷



◁ black hole phenomenon known as the Dark.

All previous attempts to destroy the Dark have been foiled by the Pen, the surrounding vast, freezing shadow that chills the mind and body of all who approach.

As you would imagine, the Unorthodox Engineers find a very unorthodox solution to the enigma, which is why the story has been supplied with the game as without its help I doubt if anyone would arrive at the correct solution.

As the instructions point out, however, knowing the solution is only part of the problem. You must find the equipment required and faithfully re-enact the storyline, which in itself has many problems.

The game is coloured-text only and uses the GO DOOR type format of commands.

Overall the text has a nice feel to it probably because it has been lifted from the book. It contains many amusing replies, such as: "To carry more you would need a supermarket trolley complete with outboard motor.

To ensure that the player follows in the footsteps of the story the program will only permit certain objects to be obtained where the correct sequence of the storyline is followed. This means that unless you SAVE the game state you cannot take short cuts when you replay the game at a later date.

I enjoyed playing this, an unusual adventure, which has some nice touches. It should be said, however, that a quick glance at the program, which is written in Basic, reveals some very unsophisticated programming. This probably accounts for the limited number of locations contained within. A short game which, while it's fun, does not deserve its high price tag. **AM**

Joys of breaking a M.U.L.E. in

Adventure *M.U.L.E.* ***Micro*** *Atari* ***Price*** *£29.95* ***Format*** *Disk only* ***Supplier*** *Electronic Arts, 2755 Campus Drive, Mateo, California, USA.*

ZAP . . . POW . . . ker-r-rang . . . zapp! "OK, Cap'n, we've cleared this sector of aliens now what shall we do about their headquarter planet?"

Why, we develop it, of course.

Mule, according to the manual, is a game of exploration and resource development on another planet.

Electronic Arts is a relatively young company. They are among my favourite producers of software.

Not only are the games excellent, but they lavish care and attention on the smallest detail of their packaging and Mule is typical, the disk coming in a colourful sleeve.

The manual, too, is beautifully produced and takes the player gently through all the rules and regulations of the game.

You choose a character, there are eight to choose from, among them the Spheroid, the Leggite and my favourite, the Bonzoid. This is Mule's handicapping system — the Flapper, for instance, gets a bit more money, and a bit more time, and is a good choice for beginners, while the more experienced Mule-er can try the Humanoid.

Having chosen a character the players are treated to a screen containing the status summary of everybody participating, with the characters marching on to the accompaniment of some of the catchiest music heard on an Atari.

They take their places in the rank order prevailing at the time, and the summary shows the amount of money, land and goods owned by each character.

Land? That's right — after the Summary Screen, you'll see the spaceship dropping you off, and then a large square starts moving from left to right over the playing area.

This is a plan view of a part of the planet, with a river running from top to bottom of the screen, and a few mountain ranges scattered about. When the square is over the plot of land you want to start developing, press the buttom on your joystick, and that plot becomes youngs. Of course other players may want it too, so be quick. The plots are highlighted in the colour of the players owning them.

Improving tactical skills

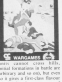
Wargame *War 70* ***Micro*** *Spectrum 48K* ***Price*** *£6.00* ***Format*** *Cassette* ***Supplier*** *Cases Computer Simulations Ltd, 14 Langton Way, London.*

IF YOU want an introduction to computer wargaming here it is. War 70 is not a game against the computer but against another player.

That is both its strength and its weakness. It is a good feature because it means no complex logic is needed to control the computer's decisions, moves and strategy, thus leaving a fair amount of memory free, which other games have to use.

Against this is the fact that you do not really need a computer to play. Much better games of the same kind can be played between two players using conventional boardgame or figure game rules.

However, I would recommend this game to anyone wanting to learn the basics of wargaming, with or without a micro computer. It contains both a strategic camaign game and a tactical battlefield game. A great deal of the game has had to be formalised to fit it into the available space (all armies are initially the same size and composition, most



units cannot cross hills, initial formations in battle are arbitrary and so on), but even so it gives a first-class flavour of both the nature of campaign and battle games.

You control up to nine groups of up to two armies each, each army being a miniscule 167 men. These groups are marched across a stylised geographical map showing the cities of the two opposing countries and the routes between them.

Each turn you may reorganise groups or move up to four groups. (Actually you can move one group four times if you wish, which is a peculiar quirk of the program because it allows a 'forced march' of extraordinary proportions). When one of your groups contacts an opposing group, a battle results and display is transferred to the tactical map.

The tactical map shows a random arrangement of trees, hills and buildings, together with the units of the opposing armies. Commands are given to each army alternately a unit at a time, with all the standard commands allowed.

One feature I particularly liked was that you could give a unit orders it could act on in successive moves, or you could change the orders each move. This allows either realistic wargames in the Wargames Research Group style, or more free-flowing battles of the 'he shot at me so I'm shooting at him' type.

All calculations are handled by the computer but experienced wargamers will find the combat system a little absurd. Nevertheless it produces an entertaining game, which is the main purpose of a program like this.

One feature I definitely did not like was the obvious built-in bias against players with the initials NW. Somehow the program always chooses the wrong player to be kind to. It can't be anything to do with my strategy . . . **NW**

On your turn, you must decide what to produce: mountains are best for mining, land near the river is best for food production, while flat land is best for energy production.

Straddling the river, at screen centre, is the town. This is where supplies must be brought, and where you pick up your Mule (you have to pay for it, of course). This, as you might know, is a Multiple Use Labour Element, and should be outfitted from the store containing the relevant supplies for the sort of production you have decided on.

Having outfitted your Mule you must then lead it out to your land and install it there where it begins producing.

If you have time left you can go back for another Mule, or make a quick gambling trip to the bar in town.

You can even, if you catch sight of it, go hunting the mythical wampus, who will give you much money to free him (he is a bit stupid, when he opens the door of his cave in the mountain, a bell rings, and you'll see a little light for an instance).

Random events will also figure during this sequence, throwing at you such things as acid rain and planetquakes.

Once all the players have taken their production turns, the plots go through the production phase.

Then to the auction, which is where the players make good use of all the goods produced. Although the computer plays a mean game, the auction is where human opponents will really make the game special. Depending on how much of each good you have (and some are survival items, meaning that you will need to buy them if you are low on that particular item), you can become a buyer or seller in each of the three auctions, one for each good.

The computer will sell and buy goods to the players, the amount available depending on how much commerce has gone on in previous rounds.

After declaring your intention to be either buyer or seller, all characters can start to fix the buying and selling prices. The sellers, of course, will try to keep the price high, while the buyers will be keeping the price as low as possible.

The auction is carried out on a separate screen, with the characters ranged on either side.

The players move up or down the screen, the leading one on each side fixing the price.

When the players meet again, the final price is set, and trading begins.

This can become a raucous free-for-all, with buyers and sellers trying to keep apart, with the occasional teasing.

After all trading has been completed, the status summary is shown again (with that wonderful music), and then it's back to the playing area to develop more land.

What I've described is the beginner's game. There is also the standard game, in which land may be auctioned off by the store (another opportunity for a raucous few minutes) and with less Mules to use. There also is the tournament game, in which Crystite, a precious element, makes an appearance. This may be found by luck, or by paying the Assay office in town to check a sample from the plot in which you are interested. In the tournament game, a certain amount of collusion can be indulged in by the players, to keep another player from profiting too much.

Atari software has the highest price tag of any, and almost always is not worth the asking price. Any program from Electronic Arts is more than worth it, however, and MULE is among the best to be found on the market. **TB**

Dragon reputation rings true

Adventure *The Ring of Darkness* ***Micro*** *Spectrum 48K* ***Price*** *£9.95* ***Format*** *Cassette* ***Supplier*** *Wintersoft, 30 Uplands Park Rd, Enfield, Middlesex.*

ALTHOUGH Wintersoft is a relative newcomer to the computing field, it has made quite a name for itself with Ring of Darkness for the Dragon micro.

It has now been enlarged and modified for the Spectrum market, and includes a fairly comprehensive instruction booklet (though no cassette insert).

The Ring is a role-playing adventure — you create your own character and this affects your progress in the game. There is a separate character generation program for this which is simple and easy to use.

After choosing a name for your character you are given 40 points to distribute between the attributes intelligence, strength, and agility.

You then select character type: elf, dwarf, or human, and choose a suitable skill, either thief, warrior, or wizard. The program then displays all the chosen attributes, giving you a chance to change anything you don't like.

The game takes place on a high-resolution map showing rivers, forests, and mountains, towns and mazes, which are represented by castles. My character appeared in the middle of the screen and I went east.

The map scrolled in the direction of movement and although the program has a lot of Basic, the response was fairly fast.



After only a couple of moves, I was attacked by bandits who appeared from nowhere. As well as leather armour and a dagger, I had some magic zappers so I tried casting a spell.

The computer told me that I could only use spells in dungeons, and while reading the combat instructions, I was beaten to a pulp.

You get attacked about every fourth move, which can become annoying after a while, though it was vital for gaining gold and experience points.

Enemies vary from bandits, which are quite easily dealt with (if you read the instructions properly first) to hidden archers, who are almost impossible to hit. Sometimes you can run away from attackers although often they will try to block your path.

On entering a town, Borderton, the land map disappeared and was replaced by a high-resolution map of the town. There was a pub, a magic shop, a smithy and armourers and the palace, with cells beside it.

Guards stood at every corner and a jester ran about the town yelling "I've got the key."

In the next game, I visited another town, Port Stillwater, and was disappointed to find that it was the same as Borderton.

Ignoring the jester this time (I learn quickly don't I) I went into the palace to have a chat with the king. After offering my services, he gave me a quest to complete: "Go forth and kill a Jelly Cube. Return when thy quest is done."

After scouring the countryside for a Jelly Cube, I gave up and soon afterwards came across the Maze of Minos. This had to be loaded from tape, annoying but to be expected since it is your favourite and mine, the three-D maze. Complete with high-resolution drawings, ladders, and ropes, and with a fast response, it was too much for this adventurer, who lost his way quite quickly.

A lot of hard work has obviously gone into producing this program. The map is very large — 10,000 moves according to the blurb, and there is a large variety of objects, weapons, spells and places to explore (it would spell the game to give any more away).

For the role-playing enthusiast, it is quite good value. **BP** □


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Wargame market



Laurence Miller *traces the history of board wargames*

THE HISTORY of gaming covers as long a span as the history of the human race.

Whenever there has been anyone with any leisure time, the innate competitiveness of people comes to the fore whether it be a sport or something less active and designed to stretch the mind.

Leaving aside the physical (computers will only simulate the idea of sport, not the effort apart from wrist and finger strain) we are left with the games of the mind.

They range from the simplest gambling games to the most complex abstract games including an apparent newcomer — wargames.

Morality issues

This type of gaming is really one of the oldest in that it represents a direct descendent from the planning done by military commanders before going to battle just as chess and allied games are no more than extremely formalised, stylistic wargames.

At this point there is usually a disussion concerning the morality of playing games based on warfare, death and destruction. This type of argument is normally raised by people who have no knowledge of the subject or the degree of involvement by participants.

Most wargamers are strongly anti-war because of their use of wargames, which gives them a degree of understanding of the effects of warfare rarely exceeded by anyone outside the military. This is without acknowledging the importance of military history and its effects on history in general.

Board wargaming in its present form probably dates from Charles Roberts' game Tactics, produced in 1953 on an amateur basis. It was recently re-released by Avalon Hill Inc as a celebration of 30 years of board wargaming.

In the succeeding years the number of companies involved in the field has grown from the original Avalon Hill set up in 1958 by Charles Roberts to far too many to list. The hobby has increased in popularity ignoring the even more successful offshoot of role-play gaming.

New meets old

At the same time the nature of board wargaming has undergone a number of changes. One of the most important is an increase in complexity tied to the increasing demand, from long-term wargamers who want improvements in the accuracy of the games as simulations, and a wider range of subjects covered.

It is at this point that the new meets the old and our new companion, the microcomputer, comes to the wargamer's assistance. It is excellent at marshalling large amounts of data and correlating tabular information.

The first games such as Tactics involved a primarily abstract battle using less than 100 counters and a few pages of rules that were easy to learn. The games were more concerned with the use of combat units in different situations rather than precise simulations of historical battles or future conflicts.

Since then wargames which have been released involve 40 or 50 square feet of maps, several thousand counters and a hundred or more pages of rules, charts and examples of play.

From the early games, which required maybe a couple of hours to play, to these monsters, which require hundreds of hours, there are many points in between. The advent of computerised wargames covers the spectrum of wargaming, including some features which are difficult to simulate with board games.

In addition to games wholly played on a computer, there are also a range of hybrids available in which the computer is used as a controlling or assisting air to playing a board game. This is very useful when using a computer with very limited graphics capability or for a game requiring extremely complex (and memory hungry) play information.

Just as in the field of board wargaming, the first computer wargames were of an abstract nature rather than concerning a particular battle, being designed rather to give the player experience at moving combat units in typical battle conditions.

Unfortunately, there is one major difference between board and computer wargaming. Anyone could attempt to use any boardgame, but with computers it is only possible to use games that are designed to run on the particular machine you own.

Furthermore, it takes a little more than calling a game a wargame before it actually is a wargame in the true meaning of the word. Many games being produced for

leaders saluted



and examines their transition onto software

microcomputers are calling arcade, fast-action games by this name just because they include tanks or aeroplanes.

A true wargame may be played in real-time (but is usually simplistic), such as Legionnaire by Chris Crawford. This can be mitigated against by the necessity for decision-making time required to deal with the strategic and tactical elements involved.

For economic reasons the first serious computer wargames originated in the United States, just like their antecedent boardgame relations. And in the same way one company, Strategic Simulations Inc, dominated the field but, unlike the board-games field, it has yet to wield a major influence in this country because of the difference in the machines that control the respective national markets.

In the US the principal personal machine was the Apple which, due to cost, failed to gain a serious foothold as a home computer in the UK where the popular machines are the Spectrum, Commodore 64, Atari and BBC B.

SSI now has a wide range of titles, from introductory to extremely complex. They cover an array of historical and possible future conflicts, from Napoleonics through to American Civil War, World War II, age of sail to modern naval and modern ground warfare as well as a range of SF and fantasy battles.

These games, although predominately available on the Apple, are now being produced for the Atari and Commodore 64 machines as well as a few titles for the TRS-80 and IBM PC.

Currently there are no other serious wargames available that match the quality of the best that SSI produce although there are now a number of other companies producing wargames of a reasonable quality that are worth buying especially if your machine isn't covered by this company.

Other companies involved in wargame manufacture include the original board wargamers, Avalon Hill, a subsidiary of which has produced a number of interesting titles ranging from the fascinating Legionnaire, produced by Chris Crawford, through to Paris In Danger (Napoleonic), TAC and Close Assault (both WWII).

Easy to choose

Although these games have a superb wargaming base, Avalon Hill still have to smooth off the rough edges on their computer games.

Other US companies, such as Broderbund, Epyx and Datamost, are producing interesting wargames for the Apple and Atari; well worth looking at if you own these machines.

Coming home to the UK the choices are far easier for anyone interested in serious wargaming as there are few companies operating in this area.

One of the originals is Molimerx, whose wargames originated on TRS-80 computers and are now being made available on the BBC micro.

The only other major producer is a company called Lothlorien who currently produce the best wargames available for the Spectrum with versions available for BBC and Dragon machines.

Their early efforts strained the meaning of the word wargames but their latest offerings are more sophisticated with games, such as Johnny Reb, gaining popular support by providing an interesting game with a reasonable grasp of American Civil War tactics.

Another rising star is Red Shift who have adapted one of Games Workshop's popular board game, Apocalypse, to BBC and Spectrum computers. It retains its original strategic flavour and the tactical options are enhanced by making good use of the computer's number-crunching abilities as well as providing a large number of alternative scenarios.

There are also a number of games being produced to high standards by individuals but because major retailers, chain store outlets are insisting on high quality packaging, these games are unlikely to be easily obtained except by direct mail order.

Bright future

The future of computer wargaming is wide open proving increasingly popular with computer owners, who tire of reflex action games and require more sophisticated ways of filling their leisure time.

Currently the production of quality wargames is limited by hard economic reality in that writing a competent conflict simulation requires a wide range of skills and knowledge than in arcade games. This is combined with a greater investment of

time but with a far smaller market available to purchase such programs.

Originally in the US this type of commitment came from the dedicated amateur programmer endeavouring to see if it was possible to produce wargames on current microcomputers.

Due to the larger number of wargamers in the US (numbers since the percentage of population is about the same as in the UK), such efforts found a ready market and led to the formation of companies such as SSI. In the UK the available purchasers for such simulations means it is far more difficult to gain a reasonable return for such effort.

This trend is changing and there is no reason why very sophisticated games programs cannot be produced for popular machines such as the Spectrum, provided the will to do it can be found.

The immediate situation in the UK means that if wargaming is a major reason for purchasing a microcomputer then the machines worth considering, in order of range of games (and quality) are Apple, Atari, Commodore 64 and Spectrum.

For most purchasers the Apple is still too expensive for home users and the range of titles available is rapidly being approached by those for the Atari, which must be the best UK purchase for wargaming both in range of titles and quality.

The Commodore 64 is beginning to have an increasing range of US titles made available and also has the superb graphics capabilities necessary, but it must be borne in mind that this machine as well as the Apple and Atari require at lest one disk drive to access the best of the software.

Finally, the Spectrum offers the best choice of homegrown wargames for the least expenditure.

All this does rather beg the question why would anyone want to play wargames with a computer.

In real life, even in modern warfare, army commanders are woefully ignorant of the status of individual units on a battlefield. In boardgame simulations the player is usually in a senior command position for marshalling overall control of a conflict, but can see the exact situation of his own units and the opposition.

Changing situation

During the course of a battle the individual commanders would send messengers back to Napoleon giving information as to the actual course of events, requesting reinforcements and asking for further orders as well as acting on their own initiative.

At the same time Napoleon would draft further orders in response to these couriers and send additional orders out by courier.

All of this takes time, couriers can get lost or killed and, by the time messages have been interchanged over many miles, the situation is still changing.

This has been given the name the fog of war. It is very difficult to simulate using a board game without involving a considerable number of additional players, but it can easily be handled on a computer.

In SSI's Napoleon's Campaigns: 1813 and 1815 you are in the position of overall command, replacing either Napoleon or Wellington with an on-screen map showing the positions of your own forces (at least where you are told they are) and the locations of the enemy, as indicated by scouting reports.

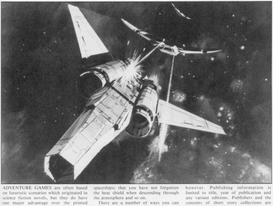
To move your troops it is necessary to send a message to the corps commanders rather than move a unit directly and, just as in real life, the courier may not get through or the commander may decide to act on his own initiative.

Not only at this level but in many different ways the computer can provide a superior simulation. An example can be found with small unit actions when a number of hours are lost in arguments over whether one unit can see another so as to open fire, is immense yet the computer can calculate such things precisely without any argument or time lost in working it out.

The wargamer already has a number of options available concerning the use of microcomputers as far as direct gaming is concerned, both solitaire where the computer is capable of providing a reasonable opponent and two-player with the computer acting as a genuinely impartial referee. □

Writing a convincing plot

John Fraser *looks at reference material available for adventure game scribes*



ADVENTURE GAMES are often based on futuristic scenarios which originated in science fiction novels, but they do have one major advantage over the printed versions: the linear nature of the book imposes unrealistic constraints on the invented world; how the characters respond to events and the sequence of those events cannot be altered however much the reader disagrees with them.

Such limitations are immediately overcome when a story is translated into a micro adventure and no doubt you have already experienced the enhanced realism that this creates.

Whether or not you have drawn inspiration from science fiction you would be well advised to do a little research in order to ensure that your game is logical and credible.

This point was emphasised in Andrew Pepper's article, *How to write your own adventures*, in the January issue, when he writes that "It is an advantage to know something about the subject you are writing a program about . . . if you have a passion for science fiction then a space adventure might be a good one to start with."

It makes sense to ensure that your spaceships at least look and behave like spaceships; that you have not forgotten the heat shield when descending through the atmosphere and so on.

There are a number of ways you can undertake the research such as with the aid of some useful reference books. These will provide answers to some of the many questions you are likely to ask when writing programs.

Reliable guide

Apart from the novels there are several convenient sources from which you can obtain plot summaries and the like. The most valuable of these is *The Encyclopedia of Science Fiction*, edited by Peter Nicholls, which is really the only comprehensive one-volume survey of the field available. It is also the most reasonably priced. For less than the cost of an average adventure tape you have access to almost every conceivable aspect of science fiction: authors, films, books, magazines and much more.

Each entry on an author provides a commentary on his or her major works, together with a listing of their other writings. There is also an extensive system of cross-references, so that novels on any particular theme can easily be located.

A couple of points should be noted however. Publishing information is limited to title, year of publication and any variant editions. Publishers and the contents of short story collections are excluded, although many stories are mentioned in the commentaries.

A more serious problem is that the text has not been updated since the original hardback edition was published in 1979. Criticism apart, this is a reliable, easy-to-use guide which is indespensible for anyone who enjoys science fiction and is contemplating writing a space adventure.

There are several other popular publications that you should find in your local library, although generally speaking these have been largely superseded by the Nicholls *Encyclopedia* and are best avoided.

For quick reference there is Mike Ashley's *Who's Who in Horror and Fantasy Fiction* and Brian Ash's *Who's Who in Science Fiction*, which is less reliable in hardback. If the Nicholls book is not available then you could dip into either Brian Ash's *Visual Encyclopedia of Science Fiction* or the Octopus *Encyclopedia of Science Fiction*, both of which, despite their titles, are not arranged alphabetically and are actually collections of essays with useful appendices.

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One excellent companion to the Nicholls *Encyclopedia*, although more expensive is Neil Barron's *Anatomy of Wonder* which contains almost 2,000 annotations of science fiction novels grouped within significant periods. Entries are arranged by author and include full publication details, with notes on awards received and so on.

In the related genres of fantasy and horror there are a couple of standard guides, but these too are comparatively expensive. *Fantasy Literature* and *Horror Literature* are both edited by Marshall B Tymn and are basically annotated listings of books, together with much supplementary information. They respectively cover some 240 and 2,000 titles, including reference books.

Some of you may have seen Gene Wright's *The Science Fiction Image* in the bookshops. This large American encyclopedia covers film, television, radio and the theatre, and is profusely illustrated with pages of colour and many black-and-white photographs. Unfortunately, however, as a review in an American science fiction news magazine, *Science Fiction Chronicle*, points out the book contains frequent errors and misleading statements and should be regarded with caution.

A far more reliable guide to films is *The Science Fiction and Fantasy Film Handbook* by Alan Frank. Films are arranged alphabetically and given thorough entries which include cast lists, plot synopses, quotations and more.

As for ensuring that you have got your scientific facts right, there are obviously many books which could be mentioned, but I shall confine myself to a selection of recent titles that are well worth sampling.

Of particular interest to space adventurers will be *The Science in Science Fiction*, again edited by Peter Nicholls. A similar book appeared a few years ago called *The Illustrated Book of Science Fiction Ideas and Dreams* but was somewhat less ambitious. *The Science in Science Fiction* is a rigorous examination of all sorts of themes and gadgets, such as time travel, cyborgs, aliens and artificial intelligence. A bibliography of background reading is also provided and should be valuable to those who occasionally find the book heavy going.

Science fact

For details on the solar system *Man and the Planets*, by Duncan Lunan, provides a planet-by-planet analysis of the solar system's resources and is a mine of information. So too is Kenneth Gatland's *Illustrated Encyclopedia of Space Technology* which is an excellent account of the development of the space industry and contains numerous diagrams and cutaway drawings.

Future war is the subject of David Langford's *War in 2080* which speculates on the future of military technology and should be invaluable for designing those spaceships and laser weapons.

On the other hand, if you would like to know how to colonise other planets *New Earths: Restructuring the Earth and Other Planets* can be strongly recommended. James Oberg, mission flight controller at NASA deals with the science of terra-forming, which means altering the planet's conditions to suit humans. The book is very readable and the author makes numerous references to science fiction as well as science fact.

These are just some of the books from which you should be able to find much useful information for your adventures. There are many more, such as author bibliographies, story indexes, even Star Trek technical manuals, the list is endless. But unless you are exceptionally enthusiastic and have few financial worries it would be more sensible to just purchase the Nicholls *Encyclopedia* and obtain the rest from the library.

Whatever you decide to do, remember that those glossy coffee-table volumes, while visually appealing, are not necessarily the most accurate. Check with other sources if you have any doubts.

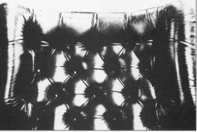
You should find that a careful reading around the subject before launching into your adventure will be time well spent. Knowing where to find details of spaceships, aliens and the like, eliminates any frustration later on. It also means for the players that suspense in a game will be sustained instead of being shattered by obvious mistakes, such as impossible events occurring within the internal logic of the imaginary world. □

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	Midway Campaign	£11.95	Atari E, Apple II, TRS80 I and III, CBM 64, Pet
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Preston	Arrow of Death 1	£9.95	Atari E, CBM 64
Lancashire	Arrow of Death 2	£9.95	Atari E, CBM 64
	Escape from Pulsar 7	£9.95	Atari E, CBM 64
	Circus	£9.95	Atari E, CBM 64
	Feasibility Experiment	£9.95	Atari E, CBM 64
	The Wizard Akyrz	£9.95	Atari E, CBM 64
	Perseus and Andromeda	£9.95	Atari E, CBM 64
	Ten Little Indians	£9.95	Atari E, CBM 64
Commodore	Adventureland	£9.99	Vic 20
675 Ajax Avenue	The Count	£9.99	Vic 20
Slough	Mission Impossible	£9.99	Vic 20
Berks	Pirate Cove	£9.99	Vic 20
	Voodoo Castle	£9.99	Vic 20
	Strategic Advance	£4.99	Vic 20 E
	High Flyer	£14.95	CBM 64 + drives
Compusense 286D Green Lanes PO Box 169 Palmers Green London N13	Pirates Ahoy	£7.95	Dragon 32
Computer Rentals	Rescue	£5.95	Spectrum 48K
140 Whitechapel Rd	Keys of Roth	£6.95	Dragon 32
London E1	Stargazer's Secrets	£5.95	Spectrum 48K
	Woods of Winter	£5.95	Spectrum 48K
	The Incredible Adventure	£5.95	Spectrum 48K
Cosmi c/o CentreSoft House Unit 16 Bloomfield Rd Tipton West Midlands	Forbidden Forest	£9.95	CBM 64
CP Software	Colossal Caves	£6.95	Spectrum 48K
17 Orchard Lane Prestwood Bucks	Golfing World	£5.95	Spectrum 48K
Crystal Computing	Dungeon Master	£7.50	Spectrum 48K
2 Ashton Way	Halls of the Things	£7.50	Spectrum 48K
East Herrington	Merchant of Venus	£5.50	ZX81
Sunderland	The Island	£7.50	ZX81
Crystal Computing c/o Soft Machine Station Crescent Blackheath London	Invasion of the Body Snatchers	£7.50	
Datasoft c/o CentreSoft House Unit 16 Bloomfield Rd Tipton West Midlands	O'Riley's Mine	£21.95	Atari
Digital Fantasia	The Wizard of Akyrz	£9.95	BBC B, Spectrum 48K
24 Norbreck Rd Blackpool	Perseus and Andromeda	£9.95	BBC B, Spectrum 48K
Lancs	Ten Little Indians	£9.95	BBC B, Spectrum 48K
	Arrow of Death 1	£9.95	BBC, Spectrum 48K
	Arrow of Death 2	£9.95	BBC, Spectrum 48K
	The Golden Baton	£9.95	BBC, Spectrum 48K
	Time Machine	£9.95	BBC, Spectrum 48K
	Circus	£9.95	BBC B, Spectrum 48K
	Feasibility Experiment	£9.95	BBC B, Spectrum 48K
	Escape from Pulsar 7	£9.95	BBC B, Spectrum 48K
DK Tronics	Dictator	£5.95	Spectrum 48K
Unit 6 Shire Hill Industrial Estate Saffron Walden Essex	Dictator	£6.95	BBC B
Doric Computer Services 3 The Oasis Glenfield Leicester LE3 8Q5	Oracles Cave	£7.95	Spectrum 48K
Dragon Data	Calisto Island	£7.95	Dragon 32
Kenfig Industrial Estate	Dragon Mountain	£7.95	Dragon 32
Margam	Madness and the Minotaur	£7.95	Dragon 32
Pt Talbot	Quest	£7.95	Dragon 32
West Glamorgan	Black Sanctum	£7.95	Dragon 32
	El Diablero	£7.95	Dragon 32
	Mansion of Doom	£7.95	Dragon 32
	Poseidon Adventure	£7.95	Dragon 32
	Final Countdown	£7.95	Dragon 32
	Stalag/Eno	£7.95	Dragon 32
Duckworth	Island Adventure	£7.95	CBM 64 ▷

COMPANY	GAME	PRICE	MICRO
◁ The Old Piano Factory 43 Gloucester Cres London NW1	Exploring Adventures on the 64	£7.95	CBM 64
	Exploring Adventures on the Vic	£7.95	Vic 20
	Exploring Adventures on the Spectrum	£7.95	Spectrum 48K
Dungeon Software Milton House St John St Ashbourne Derbyshire	The Crystal Chalice of Quorum	£7.95	Dragon 32
	The Temple of Zoren	£7.95	Dragon 32
	Treasure Tombe	£7.95	Dragon 32
	Giant's Castle	£5.95	Dragon 32
Educational Software c/o Mapsoft Unit A Oak Rd South Hadleigh Benfleet Essex	The Adventures of Proto	£17.95	Atari + drives
Eighth Day Software 18 Flaxhill Moreton Wirral Merseyside	Dark Lore	£6.95	Spectrum 48K, ZX81
English Software c/o CentreSoft House Unit 16 Bloomfield Rd Tipton West Midlands	Escape from Perilous	£14.95	Atari
Epyx c/o CentreSoft House Unit 16 Bloomfield Rd Tipton West Midlands	Temple of Apshai	£27.95	CBM 64, Atari
	Upper Reaches of Apshai	£15.95	CBM 64, Atari
	Curse of Ra	£15.95	CBM 64, Atari
	Crush Crumble Chomp	£21.95	CBM 64, Atari
	Gateway to Apshai	£27.95	CBM 64, TI99/4A
	Sword of Fargoal	£21.95	CBM 64
Epyx c/o Mapsoft Unit A Oak Rd South Hadleigh Benfleet Essex	Datestones of Ryn	£13.80	Atari E, Vic 20
	Invasion Orion	£17.25	Atari E, Vic 20
	Rescue at Rigel	£20.75	Atari E
	Star Warrior	£27.45	Atari E
	Crush, Crumble and Chomp	£20.75	Atari E
	Temple of Apshai 1	£27.45	Atari E
	Upper Reaches of Apshai 2	£13.80	Atari E
	Curse of Ra 3	£13.80	Atari E
	Crypt of the Undead	£20.75	Atari E + drives
	Dragon's Eye	£20.75	Atari E + drives
	King Arthur's Heir	£20.75	Atari E + drives
	The Nightmare	£20.75	Atari E
	Hellfire Warrior	£27.45	Atari E
	Danger in Drindisti 2	£13.80	Atari E
	The Keys of Acheron 3	£13.80	Atari E
	Monster Maze	£27.45	Atari E, Vic 20
	Escape from Vulcan's	£20.75	Atari E + drives
Exodus Penrice Drive Tividale Warley West Midlands	Pyramid	£4.95	Dragon 32
	Espionage	£4.95	Dragon 32
FBC Systems Ltd 10 Castlefields Main Centre Derby	Star Trader	£7.99	BBC B, Electron
	Star-Force Lander	£6.95	BBC B
	Valley of the Pharoahs	£7.99	BBC B, Electron
	Space Adventure One	£7.99	BBC B, Electron
Felix Software 19 Leighton Ave Pinner Middlesex	Tomb of Dracula	£4.95	Spectrum 48K
	Tomb of Dracula	£3.95	ZX81
Gebelli c/o Mapsoft Oak Rd South Hadleigh Benfleet Essex	Dr Goodcode's Tavern	£21.95	Atari E + drives
Gemtime 16 Ben Ledi Rd Kirkcaldy	Murder at the Manor	£6.95	Spectrum 48K
Gilsoft 30 Hawthorn Rd Barry South Glamorgan Wales	Tasks/Time-line	£4.95	Spectrum
	Magic Castle	£4.95	Spectrum 48K
	Diamond Trail	£4.95	Spectrum 48K
	The Quill	£14.95	Spectrum 48K
Golem 77 Qualitas Bracknell Berks	Katakombs	£8.00	BBC B

COMPANY	GAME	PRICE	MICRO
Hewson Consultants 60A St Mary's St Wallingford Oxon	Heathrow: ATC	£7.95	Spectrum
	Nightflite	£5.95	Spectrum
	Dragonfly	£6.95	Dragon 32
	Quest Adventure	£5.95	Spectrum 48K
Impact Software 70 Redford Avenue Edinburgh	Orb	£5.00	Dragon 32, Vic 20 E, Spectrum 48K
	The Quest	£5.00	Dragon 32, Spectrum 48K
	3D Maze	£5.00	Dragon 32, Spectrum 48K
Incentive Software Ltd 54 London St Reading	Mountains of Ket	£5.50	Spectrum 48K
	1984	£5.50	Spectrum 48K, BBC B
Infocom c/o Softsel Central Way Feltham Middx	Zork I, II and III	£28.75 each	Apple, Atari, CBM 64, IBM PC, TI Professional, CP/M systems (all plus drives)
Infocom c/o CentreSoft House Unit 16 Bloomfield Rd Tipton West Midlands	Deadline	£37.95	Atari E + drives
	Starcross	£37.95	Atari + drives
	Suspended	£37.95	Atari E + drives
	Witness	£37.95	Atari E + drives
Intrigue Software Cranbrook Rd Tenterden Kent	Adventuremania	£5.95	TI-99/4A, Spectrum 48K
	Mania	£5.95	TI-99/4A, Spectrum 48K
	Santa & the Goblins	£5.95	TI-99/4A
	Transylvania	£5.95	TI-99/4A
	Corridors of Time	£5.95	TI-99/4A, Spectrum 48K
JRS Software 19 Wayside Ave Worthing Sussex	Lost Island	£3.95	ZX81
	Battleships	£3.95	ZX81
J V Software c/o Mapsoft Unit A Oak Rd South Hadleigh Benfleet Essex	Journey to the Planets	£20.45	Atari E
	Green Ring Adventurer	£7.00	Spectrum
Kenema Associates 1 Marlborough Drive Worle Avon	Hell's Temple	£12.00	Oric 48K
Kew Enterprises 14 Fairway Ave Manchester	Secret Mission	£5.00	Vic 20 E
Lantern Software 4 Haffenden Rd Tenterden Kent	Troll King	£5.95	TI 99/4a
	The Black Tower	£5.95	TI 99/4a
Legend 1 Milton Rd Cambridge	Valhalla	£14.95	Spectrum 48K
Level 9 Computing 229 Hughenden Road High Wycombe Bucks	Colossal Adventure	£9.90	CBM 64, Atari, Oric, Lynx, BBC, Spectrum, Nascom
	Adventure Quest	£9.90	CBM 64, Atari, Oric, Lynx, BBC, Spectrum, Nascom
	Dungeon Adventure	£9.90	CBM 64, Atari, Oric, Lynx, BBC, Spectrum, Nascom
	Snowball	£9.95	CBM 64, Atari, Oric, Lynx, BBC, Spectrum 48K
MC Lothlorien 4 Granby Rd Cheadle Hulme Cheadle Cheshire	Samurai Warrior	£4.50	ZX81
	Samurai Warrior	£6.95	Dragon 32
	Peloponnesian War	£4.50	ZX81
	Johnny Reb	£5.50	Spectrum 48K
	Privateer	£4.50	ZX81, Spectrum 48K
	Paras	£6.95	BBC B
	Roman Empire	£4.50	ZX81
	Roman Empire	£6.95	BBC B, Dragon 32
	Roman Empire	£12.50	Atari E
	Tyrant of Athens	£4.50	ZX81
	Tyrant of Athens	£6.95	Dragon 32 ▷

COMPANY	GAME	PRICE	MICRO
	Warlord	£5.50	Spectrum 48K
	Warlord	£6.95	Oric 48K, Dragon 32
	Warlord	£4.50	ZX81
	Roman Empire	£5.50	Spectrum 48K
	Bedlam	£5.95	Spectrum 48K
	Confrontation	£7.95	Spectrum 48K
	Dreadnaughts	£5.95	Spectrum 48K
	Red Baron	£5.95	Spectrum 48K
	Battle Zone 2000	£6.95	BBC
Martech Games 9 Dillingburgh Rd Eastbourne Sussex	Galaxy Conflict	£11.95	ZX81, Spectrum
	Galaxy Conflict	£14.75	BBC B, Dragon 32, CBM 64, Atari E
	Conflict	£11.95	ZX81, Spectrum
	Conflict	£14.75	BBC B, Dragon 32, CBM 64, Atari E
Martech c/o Soft Machine Station Crescent Blackheath London	Quest of Merravid	£7.95	CBM 64, Vic 20
Melbourne House 131 Trafalgar Rd London SE10	The Hobbit	£14.95	Spectrum 48K, CBM 64, BBC, Oric
	The Wizard and the Princess	£5.95	Vic 20
Microdeal 41 Truro Rd St Austell Cornwall	Phantom Slayer	£8.00	Dragon 32
	Mansion Adventure 1	£8.00	Dragon 32
	Space Monopoly	£8.00	Dragon 32
	Keys of the Wizard	£8.00	Dragon 32
	Jerusalem Adventure	£8.00	Dragon 32
	Williamsburg Boulevard	£8.00	Dragon 32
	Ultimate Adventure	£8.00	Dragon 32
	Escape	£8.00	Dragon 32
Mikro-Gen 24 Agar Crescent Bracknell Berks	Sorcerer's Castle	£5.50	Spectrum
	Mad Martha	£5.50	Spectrum
	Mines of Saturn/ Return to Earth	£5.95	Spectrum
Molimerx 1 Buckhurst Rd Town Hall Square Bexhill-on-Sea East Sussex	Mysterious Adventures: Golden Baton, Time Machine, Arrow of Death Parts I and II, Escape from Pulsar 7, Circus, Feasibility Experiment, Wizard of Akyrz, Perseus and Andromeda, Ten Little Indians	£10.06 each	TRS80 I and III, Video Genie I and II, Colour Genie, BBC B
	Epic Hero: Ocean Hunt, Dungeon of Derojhen, Venus Must Live	£10.06 each*	TRS80 I and III, Video Genie I and II
	Battle of Britain	£15.53	TRS80 I and III, Video Genie I and II
	Concorde	£17.25	TRS80 I and III, Video Genie I and II
	Everest Explorer	£10.06	TRS80 I and III, Video Genie I and II
	Temple of Bast	£10.06	TRS80 I and III, Video Genie I and II
	Wumpus	£6.32	TRS80 I and III, Video Genie I and II
Mr Micro 69 Partington Lane Swinton Manchester	Dracula	£6.90	Oric E
	Mysterious Island	£9.90	Vic 20 E
	Gold Rush	£6.90	Vic 20
Muse Software c/o Softsell Central Way Feltham Middx	Castle Wolfenstein	£21.55	Apple, Atari (both plus drives)
Newsoft 12 Whitebroom Rd Warners End Hemel Hempstead Herts	Black Dwarf's Lair	£4.95	Spectrum
	Time Bandits	£4.95	Spectrum
	Secret Valley	£4.95	Spectrum
	Great Western	£4.95	Spectrum
	Spectral Maze	£4.95	Spectrum
OIC Ltd 15 Burghead Close College Town Camberley Surrey	Dodgy Dealer	£6.50	BBC B
	Counter Attack	£6.50	BBC B, Electron
On-Line Systems c/o Mapsoft	Mission: Asteroid	£17.19	Atari E + drives
	Wizard and the	£21.79	Atari E + drives

COMPANY	GAME	PRICE	MICRO
Unit A Oak Rd South Hadleigh Benfleet Essex	Princess		
	Ulysses and the Golden Fleece	£20.64	Atari E + drives
Peaksoft 7 Hawthorn Crescent Burton-on-Trent Derbyshire	Death's Head Hole	£5.45	Dragon 32, BBC B, Spectrum 48K
	Don't Panic	£3.45	Dragon 32
	Lionheart	£5.45	Dragon 32
	Champions!	£6.95	Dragon 32, BBC B, Spectrum 48K, Oric 48K, Electron
Penguin c/o CentreSoft House, Unit 16 Bloomfield Rd Tipton East Midlands	Spy's Demise	£15.95	Atari
	The Spy Strikes Back	£15.95	Atari
Phipps Associates 99 East St Epsom Surrey	Knight's Quest	£4.95	Spectrum, ZX81
	Greedy Gulch	£4.95	ZX81
	Magic Mountain	£4.95	Spectrum
	Adventure	£5.00	ZX81
	Novotnick Puzzle	£5.00	ZX81
	Gorgon	£4.95	Spectrum 48K
	Black Planet	£5.95	Spectrum 48K
	The Forest	£9.95	Spectrum 48K
Pixel Games c/o Quicksilva 92 Northam Rd Southampton	Trader	£9.95	ZX81, Spectrum
		£14.95	Vic 20
Portent Adventures	Robin Hood	£5.95	Dragon 32
	Lost Tower of Tintagel	£6.96	Dragon 32
Premier 208 Croydon Road London SE20	Adventure Plus	£7.95	Dragon 32
	House of Horrors	£4.95	Dragon 32
	Caverns of Doom	£4.95	Dragon 32
	Dungeons of Death	£6.95	Dragon 32
	Dragon Power	£7.95	Dragon 32
	Plant	£5.95	Dragon 32
	Oil Recovery	£5.95	Dragon 32, Video Genie, TRS80 I and III
Program Power 8/8A Regent St Chapel Allerton Leeds	Adventure	£7.95	BBC
	Eldorado Gold	£6.95	BBC B
	Labyrinths of La Coshe	£7.95	BBC B
Protek c/o Soft Machine Station Crescent Blackheath London	Airliner	£9.95	Spectrum 48K
	Seek	£6.95	BBC
	Adventure	£6.95	BBC
	Caveman Adventure	£6.95	BBC
Psion 2 Huntsworth Mews Gloucester Place London NW1	Flight Simulation	£7.95	Spectrum 48K
Quality Software c/o CentreSoft House Unit 16 Bloomfield Rd Tipton West Midlands	Ali Baba	£24.95	Atari E + drives
Quicksilva 92 Northam Rd Southampton	Trader	£9.95	ZX81, Spectrum
	Trader	£14.95	Vic 20
	Pioneer Trail	£3.95	ZX81
	Ocean Trader	£3.95	ZX81
	Smuggler's Cove	£6.95	Spectrum 48K
	Velnor's Lair	£6.95	Spectrum 48K
Red Shift c/o Soft Machine Station Crescent Blackheath London	Apocalypse	£9.95	BBC
Red Shift 12C Manor Road London N16	Apocalypse	£9.95	Spectrum 48K, BBC B
	Apocalypse Expansion: Maps	£4.95	Spectrum 48K
	Apocalypse Expansion: Ancient Scenarios	£4.95	Spectrum 48K
	Apocalypse Expansion: Modern Scenarios	£4.95	Spectrum 48K
Richard Shepherd Software Elm House 23-25 Elmshott Lane Cippenham Slough	Super Spy	£6.50	Spectrum 48K, CMB 64, Dragon 32
	Transylvanian Tower	£6.50	Spectrum 48K, CBM 64, Dragon 32

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COMPANY	GAME	PRICE	MICRO
Berks	Everest Ascent	£6.50	Spectrum 48K, CMB 64
	Ship of the Line	£4.95	Spectrum
	Ship of the Line	£6.50	Spectrum 48K, CBM 64
	Invincible Island	£6.50	Spectrum 48K
	Devils of the Deep	£6.50	Spectrum 48K
Rocklan	Wizard of Wor	£29.95	Atari E + drives
c/o CentreSoft House			
Unit 16			
Bloomfield Rd			
Tipton			
West Midlands			
Romik Software	Tombs of Xeiops	£6.99	CBM 64
272 Argyll Ave	Fool's Gold	£6.99	CBM 64
Slough			
Berks			
Salamander	Franklin's Tomb	£9.95	Dragon 32, Oric 48K, BBC B
17 Norfolk Rd			
Brighton	Wizard War	£7.95	Dragon 32
Sussex	Lost in Space	£9.95	Dragon 32
	Everest	£7.95	Dragon 32
	Night Flight	£7.95	Dragon 32
	737 Flight Simulator	£9.95	BBC B
Saturn Software	Tomb of Tuthmosis	£5.50	Dragon 32
Sycamores	Wax Works	£5.50	Dragon 32
Somersham	Volcano Island	£7.00	BBC B
Cambs			
SCR Adventure	Castle Blackstar	£8.95	Spectrum 48K
190 Shelbourne Rd			
Tottenham			
London N17			
Severn Software	Grail	£6.95	Oric 48K
5 School Crescent	Moria	£4.95	Spectrum
Lydney	Moria	£6.95	Oric 48K
Glos			
Shards Software	Pettigrew's Diary	£7.95	Dragon 32
189 Eton Rd			
Ilford			
Essex			
Richard Shepherd Software	Super Spy	£6.50	Spectrum 48K
	Transylvanian Tower	£6.50	Spectrum 48K
Elm House	Everest Ascent	£6.50	Spectrum 48K
23-25 Elmshott Lane	Ship of the Line	£4.95	Spectrum
Cippenham	Ship of the Line	£6.50	Spectrum 48K
Slough	Invincible Island	£6.50	Spectrum 48K
Berks	Devils of the Deep	£6.50	Spectrum 48K
Sierra On-Line Systems	Mission Asteroid	£17.95	Atari plus drives
	Mission Asteroid	£14.35	Apple plus drives
c/o Softsel	Mystery House	£17.95	Apple plus drives
Central Way	Wizard and Princess	£23.70 *	Atari, Apple (both plus drives)
Feltham			
Middx	Cranston Manor	£28.75	Atari plus drives
	Cranston Manor	£25.50	Apple plus drives
	Ulysses and the Golden Fleece	£25.50	Apple, IBM PC (both plus drives)
	Time Zone	£71.95	Apple plus drives
Silverlind	Haunted House	£6.00	BBC B
156 Newton Rd	Journey to the Stars	£6.50	BBC B
Burton-on-Trent	Passport to Death	£6.50	BBC B
Staffs	Pentiles	£6.50	BBC B
	Othello	£6.95	BBC B
Sinclair	Embassy Assault (also see under Psion and Artic)	£4.95	Spectrum
Stanhope Rd			
Camberley			
Surrey			
Sirius	Fantastic Voyage	£27.95	Atari E + drives
c/o CentreSoft House			
Unit 16			
Bloomfield Rd			
Tipton			
West Midlands			
Soft Toys	The Lair	£6.00	Vic 20
14 Lockharton Ave	Star Warp II	£6.00	Vic 20
Edinburgh			
Software For All	JR	£6.95	BBC
72 North St	Space Kingdom	£7.95	BBC B
London N6	Area Radar Controller	£6.95	BBC B
Sulis Educational Software	Time Traveller	£7.95	Spectrum, BBC
4 Church St			
Abbey Green			
Bath			
Sulis Educational Software	Time Traveller	£7.95	Spectrum, BBC
4 Church St			
Abbey Green			
Bath			
Spectrum	Realms of the Undead	£5.50	Spectrum 48K
c/o CentreSoft House			
Unit 16			
Bloomfield Rd			
Tipton			
West Midlands			
Superb Software	The Island	£10.00	CBM 64
9B Oval Rd			
London NW1			
Supersoft	Goblin Towers	£9.95	CBM 64
Winchester House	Streets of London	£9.95	CBM 64
Canning Rd	Forestland	£9.95	CBM 64
Wealdstone	Cosmic Capers	£7.95	CBM 64
Harrow	Cracks of Fire	£7.95	CBM 64
Middlesex	Catacombs	£27.00	Pet + drives
	Weird Wood	£25.00	Pet + drives
	Cornucopia	£35.00	Pet + drives
	Goblin Towers	£14.00	Pet + drives
	Cosmic Capers	£16.00	Pet + drives
	Cracks of Doom	£16.00	Pet + drives
Swifty	Space Module 1	£18.95	Atari E + drives
c/o Mapsoft			
Unit A			
Oak Rd South			
Hadleigh			
Benfleet			
Essex			
Synapse	Shamus I	£24.95	Atari, CBM 64
c/o CentreSoft House	Shamus II	£24.95	Atari E
Unit 16	Necromancer	£24.95	Atari E
Bloomfield Rd			
Tipton			
West Midlands			
Temptation Software	Dungeons of Doom	£5.95	Spectrum 48K, ZX81
27 Cinque Ports St			
Rye	Admiral Graf Spee	£5.95	Spectrum 48K ZX81
East Sussex			
	Special Mission	£5.95	TI99/4A E
	Baron	£5.95	Spectrum 48K, ZX81
Terminal Software	Curse of the Werewolf	£9.95	Vic 20 E
28 Church Lane	Rescue from Castle Dread	£9.95	Vic 20 E
Prestwich			
Manchester	Magic Mirror	£9.95	Vic 20 E
	Nosferatu	£9.95	Vic 20 E
	Space Island	£6.95	Spectrum 48K
	Vampire Village	£6.95	Spectrum 48K
Ultimate	Atic Atac	£5.50	Spectrum 48K
The Green	Lunar Jetman	£5.50	Spectrum 48K
Ashby-de-la-Zouch			
Leics			
Virgin Games	Castle Adventure	£6.95	Dragon 32
61-63 Portobello Rd			
London W11			
Wintersoft	Ring of Darkness	£9.95	Dragon 32
30 Uplands Park Rd	Operation Gremlin	£6.95	Oric 48K
Enfield			
Middx			
Work Force	Adventure in Time	£7.00	ZX81, Spectrum 48K
140 Wilsden Ave			
Luton	Pirate Island	£6.50	Spectrum 48K
Beds			

NOTES TO THE TABLE

Atari

The programs will run on either the Atari 400 or 800 unless E is specified, in which case extra memory is needed on the 400.

BBC

The programs will run on either of the BBC micros unless the model B is specified, in which case extra memory is needed on the model A.

Drives

If a program needs a disk drive system this is specified in the micro column.

Spectrum

The programs will run on either Spectrum model unless 48K is specified.

ZX81

All programs need a 16K RAM pack.

YOUR ADVENTURES

Programs from readers this month include a graphical adventure for the ZX-81, which incorporates the scrolling window technique used in The Hobbit. The program includes a short piece of machine code so that the window scrolls faster. The window is sited at the bottom of the screen and reveals messages to players concerning the characters. The action and a map are displayed constantly at the top of the screen (**this page**).

This program for the Spectrum 16K and 48K translates English into Middle Earth Runes. The program achieves this by redefining the character set of the computer, changing the lower-case letters with the runes (**page 46**).

Send us your adventure listings — modules which readers can incorporate into their own games, short adventures and useful programming routines are all welcome. Please send us a printout and cassette along with a general description of the program and details of how it is constructed and can be used. If you want us to return your program, enclose a stamped, addressed envelope. If you have any queries on the listings, write to the appropriate author, Your Adventures, Micro Adventurer, 12-13 Little Newport St, London WC2R 3LD

Machine code speeds up scrolling window

A graphical adventure for the ZX-81 from Jeffrey Tullin, in Tyne and Wear.

THIS PROGRAM attempts to incorporate the scrolling window technique used in The Hobbit. It includes a short piece of machine code which speeds up the scroll.

The game is a graphical adventure. The action and a map are displayed throughout on the top of the screen while messages appear at the bottom window.

Line 1 requires 11 characters in REM statement to house the machine code. The code is poked into place by the routine at Line 2750. Care must be taken when typing in Line 2740, as this data must be poked.

The Line at 580 is also vital as it puts the address of Line 15 of the screen into the last print position variable of the ZX-81's operating system. It could be changed to scroll a different part of the screen in your own programs if you wish.

The listing was printed on an MCP40 printer so the ZX-81 character is a little difficult to achieve. Lower case has been used as inverse characters throughout. For the hash character read a graphic grey square. And the characters at the end of Lines 2410 to 2530 are half graphic grey squares. At Line 2540 is a 3/4 black block.

```
10 REM ########### (11 CHRS.)
20 CLS
30 PRINT "   * * * *PLEASE WAIT* * * *"
40 GOSUB 2110
50 REM ##### SET-UP PROCEDURE
60  PRINT AT 2,0;"####################"
70 FOR Z=1 TO 10
80 PRINT "#";P$(Z);"#"
90 NEXT Z
100  PRINT "####################"
110  PRINT "--------------------------------"
120 POKE P,27
130 PRINT AT 0,0;"####alien rescue####  status"
140 PRINT AT 4,X;"STR. =2000"
150 PRINT AT 6,X;"GOLD =0"
160 PRINT AT 8,X;"MOVE =0"
170 PRINT AT 10,X;"PARTS=0"
180 REM #### END OF SET UP ####
190 REM....
200 REM #### MOVEMENT PROCEDURE ####
210 GOSUB SCROLL
220 GOSUB SCROLL
230 REM ::   SCROLL IS A VARIABLE:
240 PRINT AT 21,Y;"WHICH WAY NOW, ";N$;" "
250 INPUT D$
260 IF LEN D$ THEN LET D$=D$(1)
270 IF D$<>"N" AND D$<>"S" AND D$<>"E" AND D$<>"W" THEN GOTO 250
280 LET TI=TI+1
290 GOSUB SCROLL
300 GOSUB SCROLL
310 PRINT AT X,Y;"HEADING "+("north" AND D$="N")+("south" AND D$="S")+("west"
AND D$="W")+("east" AND D$="E")+"..  "
320 LET NP=P
330 LET NP=NP+(D$="E")-(D$="W")+((D$="S")-(D$="N")) *33
340 IF PEEK NP<>136 THEN GOTO 410
350 GOSUB SCROLL
360 PRINT AT X,Y;"no exit IN THAT DIRECTION"
370 LET NP=P
380 FOR Z=1 TO 20
390 NEXT Z
400 GOTO 210
410 POKE P,OC
420 LET OC=PEEK NP
430 LET P=NP
440 FOR Z=1 TO 10
450 POKE P,OC
460 POKE P,27
470 NEXT Z
480 IF RND>.4 THEN GOSUB FIGHT
490 GOSUB DISPLAY
500 IF OC=23 THEN GOSUB FIND
510 IF OC=57 THEN GOSUB TELE
520 IF OC=130 THEN GOSUB 2000
530 GOSUB DISPLAY
540 GOTO 210
550 REM #### END OF MOVEMENT ####
560 REM ..
570 REM #### MACHINE CODE SCROLL ####
580 PRINT AT 15,0;
590 LET ZZ=USR 16514
600 RETURN
610 REM #### END SCROLL ####
620 REM ..
630 REM #### FIGHT ROUTINE ####
640 LET M=INT (RND*10)+1
650 LET C$=M$(M)(TO CODE M$(M)(10))+"(STR. "+STR$ VAL (M$(M)(12 TO 13))+")"
660 GOSUB SCROLL
```

```
670 GOSUB SCROLL
680 PRINT AT X,Y;"look out.."
690 FOR Z =1 TO 30
700 NEXT Z
710 GOSUB SCROLL
720 PRINT AT X,Y;"HERE IS A ";C$
730 LET RND=RND
740 REM: THE 1ST RND IS A VARIABLE:
750 FOR Z=1 TO 30
760 NEXT Z
770 GOSUB SCROLL
780 PRINT AT X,Y;"IT HAS "+("NOT " AND RND<.3)+"SEEN YOU."
790 IF RND<.3 THEN RETURN
800 GOSUB SCROLL
810 GOSUB SCROLL
820 PRINT AT X,Y;"YOU MUST FIGHT FOR YOUR LIFE"
830 GOSUB SCROLL
840 PRINT AT X,Y;"HOW MUCH EFFORT WILL YOU USE?"
850 INPUT Z$
860 IF NOT LEN Z$ OR LEN Z$>4 THEN GOTO 850
870 FOR Z=1 TO LEN Z$
880 IF CODE Z$(Z)<28 OR CODE Z$(Z)>37 THEN GOTO 850
890 NEXT Z
900 LET E=VAL (Z$)
910 IF E>ST OR (E<10 AND ST>10) THEN GOTO 930
920 GOTO 970
930 GOSUB SCROLL
940 GOSUB SCROLL
950 PRINT AT X,Y;"come off it.. try again.."
960 GOTO 830
970 IF NOT MS THEN LET MS=VAL M$(M)(12 TO 13)
980 LET MD=VAL M$(M)(14 TO 15)
990 LET ST=ST-E
1000 GOSUB SCROLL
1010 IF RND<.05*(E/MS+MD) THEN LET DA=(INT (RND*E+10) AND (RND*14)>MD)
1020 GOSUB SCROLL
1030 IF NOT DA THEN GOTO 1060
1040 PRINT AT X,Y;"YOU INFLICT "+(STR$(DA) AND DA<=MS)+(STR$(MS) AND DA>MS)+("NO" AND NOT DA)+" DAMAGE TO"
1050 GOSUB SCROLL
1060 PRINT AT X,Y;"THE ";C$( TO CODE M$(M)(16));
1070 IF NOT DA THEN PRINT " AVOIDS THE BLOW"
1080 GOSUB DISPLAY
1090 LET MS=MS-DA
1100 IF MS<0 THEN LET MS=0
1110 IF MS THEN GOTO 1220
1120 GOSUB SCROLL
1130 GOSUB SCROLL
1140 PRINT AT X,Y;"THE MONSTER IS DEAD.."
1150 GOSUB SCROLL
1160 PRINT AT X,Y;"IT WAS CARRYING ";
1170 LET GP=INT (RND*(VAL M$(M)(12 TO 13)))
1180 PRINT GP;" GOLD COINS"
1190 LET GD=GD+GP
1200 RETURN
1210 GOSUB SCROLL
1220 GOSUB SCROLL
1230 PRINT AT X,Y;"THE CREATURE ATTACKS"
1240 FOR Z=1 TO 30
1250 NEXT Z
1260 LET DA=INT ((RND*MS)*(RND+.5) AND RND >.2)
1270 LET ST=ST-DA
1280 GOSUB SCROLL
1290 PRINT AT X,Y;"CAUSING "+STR$ (DA) AND DA)+("NO AND NOT DA)+" DAMAGE"
1300 IF MS>5 THEN LET MS=MS-5
1310 IF ST<0 THEN LET ST=0
1320 GOSUB SCROLL
1330 IF ST THEN GOTO 930
1340 GOSUB SCROLL
1350 GOSUB SCROLL
1360 PRINT AT X,Y;"you have been killed"
1370 GOSUB SCROLL
1380 LET F$="press any key to replay.."
1390 PRINT AT X,Y;F$
1400 IF INKEY$="" THEN LET F$=F$(2 TO )+F$(1)
1410 IF INKEY$="" THEN GOTO 1390
1420 IF INKEY$<>"" THEN GOTO 1420
1430 GOTO 10
1440 REM **** LOOP BACK TO START ****
1450 REM ..
1460 REM **** FIND ROUTINE ****
1470 GOSUB SCROLL
1480 GOSUB SCROLL
1490 PRINT AT X,Y;"YOU HAVE FOUND A TELEPORTER PART"
1500 LET PART=PART+1
1510 LET B$=STR$ PART
1520 PRINT AT 10,27;B$
1530 LET OC=0
1540 RETURN
1550 REM **** END OF ROUTINE ****
1560 REM ..
1570 REM **** DISPLAY ROUTINE ****
1580 LET S$=STR$ ST
1590 PRINT AT 4,27;S$
1600 LET G$=STR$ GD
1610 PRINT AT 6,27;G$
1620 LET T$=STR$ TI
1630 PRINT AT 8,27;T$
1640 RETURN
1650 REM **** END OF DISPLAY ****
1660 REM .
1670 REM **** TELEPORT BUILDING ****
1680 GOSUB SCROLL
1690 GOSUB SCROLL
1700 PRINT AT X,Y;"teleport building"
1710 GOSUB SCROLL
1720 GOSUB SCROLL
1730 PRINT AT X,Y;("YOU DONT HAVE ENOUGH PARTS" AND PART<10)+("YOU DONT HAVE THE CREWMAN YET" AND PART=10 AND NOT CR)
1740 IF PART<10 OR NOT CR THEN RETURN
1750 PRINT AT X,Y;"CONGRATULATIONS.
1760 FOR Z=1 TO 100
1770 NEXT Z
1780 GOSUB SCROLL
1790 GOSUB SCROLL
1800 PRINT AT X,Y;"<<<<teleporting now>>>>"
1810 FOR Z=20 TO 0 STEP -1
1820 PRINT AT Z,0;"00000" (32 SPACES)
1830 NEXT Z
1840 PRINT AT 21,0;"00000" (32 SPACES)
1850 FOR Z=1 TO 25
1860 FAST
1870 FOR N=1 TO 10
1880 NEXT N
1890 SLOW
1900 FOR N=1 TO 10
1910 NEXT N
1920 NEXT Z
1930 PRINT AT 0,0;
1940 PRINT "well done=you rescued the crew  member and in the process gained";GD;" gold coins."
1950 PRINT "ANOTHER GAME? (Y/N)"
1960 INPUT L$
1970 IF L$(1)<>"Y" THEN NEW
1980 GOTO 10
1990 REM.
2000 REM **** CREWMAN ROUTINE ****
2010 GOSUB SCROLL
2020 GOSUB SCROLL
2030 PRINT AT X,Y;"you have found the crew member"
2040 GOSUB SCROLL
2050 PRINT AT X,Y; NOW YOU HAD BETTER MAKE TRACKS.
2060 LET CR=1
2070 LET ST=ST+1000
2080 RETURN
2090 REM **** END CREWMAN ****
2100 REM .
2110 REM *** SET UP ROUTINE ****
2120 DIM P$(10,10)
2130 LET P=PEEK 16396+256*PEEK 16397+110
2140 FOR Z=1 TO 10
2150 LET STAR=INT (RND*10)+1
2160 [illegible]
2170 IF(Z=3 AND STAR<3) OR (Z=1 AND STAR =10) OR (Z=10 AND STAR=1) OR (Z=6 AND STAR=9) THEN GOTO 2150
2180 NEXT Z
2190 LET P$(5)( TO 2)="▀▀"
2200 LET P$(Z-1)( TO 2)="▄▄"
2210 LET P$(5)(9)="T"
2220 LET MS=0
2230 LET CR=0
2240 LET OC=0
2250 LET MP=P
2260 LET FIND=1460
2270 LET DISPLAY=1570
2280 LET SCROLL=570
2290 LET [illegible]
2300 LET TELE=1670
2310 DIM E$(32)
2320 LET Y=0
2330 LET X=21
2340 LET ST=2000
2350 LET TI=0
2360 LET GD=0
2370 DIM S$(5)
2380 DIM T$(5)
2390 DIM G$(5)
2400 DIM M$(15,16)
2410 LET M$(1)="PSI-TIGER  3005▄"
2420 LET M$(2)="ID-VAMPIRE 4106"+CHR$ (11)
2430 LET M$(3)="CYBER-NAUT 3007▀"
2440 LET M$(4)="MUTANT CRAB2420"+CHR$ (11)
2450 LET M$(5)="CORE SPIDER2004"+CHR$ (11)
2460 LET M$(6)="WHEEL WORM 1003▀"
2470 LET M$(7)="STARDRAGON 4703▀"
2480 LET M$(8)="SWAMP SHARK2020"+CHR$ (11)
2490 LET M$(9)="SKY LION   4106"+CHR$ (8)
2500 LET M$(10)="NOMAD ALIEN1404"+CHR$ (11)
2510 LET M$(11)="TIME RIDER 2704▀"
2520 LET M$(12)="STEEL SNAKE3210"+CHR$ (11)
2530 LET M$(13)="HYPER-FLY  8510▄"
2540 LET M$(14)="TRIFFID    2503▀"
2550 LET M$(15)="DRONE ROBOT1105"+CHR$ (11)
2560 LET M$(16)="FIRE WHEFER1008"+CHR$ (11)
2570 LET PART=0
2580 RETURN
2590 REM **** END OF SET UP ****
2600 REM .
2610 REM
2620 SAVE "ALIEN RESCUE"
2630 CLS
2640 PRINT "      *** alien rescue ***"
2650 PRINT "          BY- J SULLIN"
2660 PRINT
2670 PRINT " THE OBJECT OF THE GAME IS FOR  YOU, AS THE RESCUER,TO LOCATE ANDRESCUE ONE CREWMAN FROM THE    HOSTILE PLANET OF Kross."
2680 PRINT "TO ACHIEVE THIS,YOU WILL HAVE TO BRING BACK ALL TEN PIECES OF THE FLUNDERED TELEPORT MACHINERY    AND CARRY IT TO THE TELEPORT   BUILDING,WHERE IT CAN BE CHECKED AND REASSEMBLED."
2690 PRINT "THE MISSING CREWMAN WILL BE HELD IN THE BLACK PRISON."
2700 PRINT "YOU ARE SHOWN ON THE MAP AS A"";WHILST TELEPORT SPARES ARE SHOWN AS "*""
2710 PRINT "Please enter your name"
2720 INPUT N$
2730 IF NOT LEN N$ OR LEN N$>12 THEN GOTO 2720
2740 LET Q$="000042014064223203000103400000030012310002373176201"
2750 FOR Z=16514 TO 16528
2760 LET Q$=Q$(4 TO)
2770 POKE Z,VAL Q$( TO 3)
2780 NEXT Z
2790 GOTO10
```

Middle Earth secrets come to light

Text from Paul Houbart

THE PROGRAM, for the Spectrum 48K or 16K, will translate English sentences into Middle Earth Runes and vice-versa.

The program achieves this by redefining the computer's character set, changing the lower-case letters with the runes.

Line 30 tells the computers that the new character set starts at 31743, while line 20 redefines the lower-case characters.

Line 10 copies the entire set above Ramtop, which is reset to 31743.

Lines 100 to 430 contain the data for each rune, first with the character it replaces, then with 8 numbers for that rune.

When the user chooses English to Runes, the computer inputs (the English in a string. It then proceeds to check through the string, first checking for certain double-letter endings: lines 1060 to 1085, such as ng, and then translates the upper-case of the string to lower case. When this is printed, using a different string, line 1120, the lower case are printed as Runes.

Runes to English works in the opposite way. Each Rune is chosen by a code, which represents that Rune's position in a string, line 1225.

Double endings are checked by lines 1270 to 1310, otherwise the Rune's code is changed to the upper case equivalant, line 1260.

The English is set up in B$, which is printed by line 1350. If the user halts the program, then the character set is reset to point at 15615, line 9999.

This program has many uses. One example is to have a spell on a scroll written in the Runes, which will be translated when a certain object or action has occurred.

Another would be to have a password to open a door written on the door, turning to English if, say, the torch is lit. Finally, it could be used to simply give a program that special quality.

The program writer should contact the magazine so payment can be arranged. □

```
   1 REM  MIDDLE EARTH RUNE
          TRANSLATOR
   2
   5 POKE 23658,8: POKE 23609,15
: POKE 23562,1: REM RUN THIS
  BEFORE TYPING ANY MORE
   6
  10 CLEAR 31743: FOR N=15616 TO
 16383: POKE N+16128,PEEK N: NEX
T N
  15 PRINT AT 10,10;"PLEASE WAIT
"
  20 FOR N=1 TO 33: READ K$: LET
 A=31744+(CODE C$-32)*8: FOR M=0
 TO 7: READ B: POKE A+M,B: BEEP
.003,B/4: NEXT M: NEXT N
  30 POKE 23607,123
  35
  36 REM MAKE SURE THE LETTERS
       IN THE FOLLOWING DATA
     ARE IN LOWER CASE
 100 DATA "a",0,96,80,72,96,80,7
2,64
 110 DATA "b",0,96,80,72,112,72,
80,96
 120 DATA "c",0,64,64,64,96,80,7
2,68
 130 DATA "d",0,65,99,85,73,85,9
9,65
 140 DATA "e",0,65,99,85,73,65,6
5,65
 150 DATA "f",64,85,106,84,104,8
0,96,64
 160 DATA "g",0,65,34,20,8,20,34
,65
 170 DATA "h",0,68,100,84,76,100
,84,76
 180 DATA "i",0,16,16,16,16,16,1
6,16
 190 DATA "j",0,124,16,16,16,16,
16,124
 200 DATA "k",0,64,64,80,104,68,
66,66
 210 DATA "l",0,64,96,80,64,64,6
4,64
 220 DATA "m",0,65,99,85,73,85,9
9,65
 230 DATA "n",0,16,80,48,24,20,1
8,16
 240 DATA "o",0,104,80,64,104,80
,64,64
 250 DATA "p",0,68,104,80,64,80,
104,68
 260 DATA "q",0,60,66,66,82,74,6
0,0
 270 DATA "r",0,96,80,72,80,96,8
0,72
 280 DATA "s",0,32,34,38,42,50,3
4,2
 290 DATA "t",0,28,42,73,8,8,8,8
 300 DATA "v",0,112,76,66,66,66,
66,66
 310 DATA "u",0,66,66,66,66,66,7
6,112
 320 DATA "w",0,48,40,36,40,48,3
2,32
 330 DATA "x",0,73,42,28,8,8,8,8
 340 DATA "y",0,96,88,70,65,127,
73,73
 350 DATA "z",8,8,8,8,8,28,42,73
 355
 356
 360 DATA "{",0,73,93,42,8,8,8,8
 370 DATA "|",0,28,34,20,8,20,34
,55
 380 DATA "}",0,68,40,16,40,16,4
0,68
 390 DATA "[",0,99,85,73,65,73,6
5,99
 400 DATA "\",0,32,56,36,36,56,3
2,32
 420 DATA "@",0,0,8,28,8,0,0,0
 430 DATA "%",0,0,0,0,0,8,28,8
1000 REM  TRANSLATOR
1010 PAPER 7: BORDER 0: INK 0: C
LS : PRINT AT 0,8;"RUNE TRANSLAT
OR.";AT 1,8;"rune translator."
1015 PRINT AT 5,0;"CHOOSE:-": PR
INT "1-ENGLISH TO RUNES": PRINT
'"2-RUNES TO ENGLISH": PRINT '"3
-STOP": LET K$=INKEY$: IF K$<>"1
" AND K$<>"2" AND K$<>"3" THEN G
```

```
0 TO 1015
1016 GO TO (1020 AND K$="1")+(12
00 AND K$="2")+(9999 AND K$="3")
1017 REM ENGLISH TO RUNES
1018
1020 CLS : PRINT "ENGLISH TO RUN
ES": POKE 23658,8: INPUT "TYPE I
N MESSAGE"'' LINE A$
1030 IF A$="" THEN GO TO 1020
1040 LET A$=A$+"%"
1050 LET B$=""
1060 FOR N=1 TO LEN A$-1
1065 IF A$(N TO N+1)="TH" THEN L
ET B$=B$+"\": LET N=N+1: NEXT N
1066 IF A$(N TO N+1)="OO" THEN L
ET B$=B$+"o": LET N=N+1: NEXT N
1070 IF A$(N TO N+1)="EA" THEN L
ET B$=B$+"{": LET N=N+1: NEXT N
1075 IF A$(N TO N+1)="EE" THEN L
ET B$=B$+"|": LET N=N+1: NEXT N
1080 IF A$(N TO N+1)="NG" THEN L
ET B$=B$+"}": LET N=N+1: NEXT N
1085 IF A$(N TO N+1)="  " THEN L
ET B$=B$+"  ": NEXT N
1086 IF A$(N)="." THEN LET B$=B$
+"%": NEXT N
1090 IF A$(N)="Q" THEN LET B$=B$
+"cw": NEXT N
1095 IF A$(N)=" " THEN LET B$=B$
+"@": NEXT N
1100 IF A$>"@" AND A$<"[" THEN L
ET B$=B$+CHR$ (CODE A$(N)+32)
1110 NEXT N
1120 PRINT "MESSAGE TRANSLATED":
 PRINT ''"MESSAGE WAS:-": PRINT
'A$: PRINT '"TRANSLATION IS": PR
INT 'B$
1130 INPUT "PRINT TRANSLATION (Y
 OR N)?";K$: IF K$="" THEN GO TO
 1130
1140 IF K$="Y" THEN LPRINT B$: L
PRINT : LPRINT : LPRINT
1150 GO TO 1000
1199
1200 REM RUNES TO ENGLISH
1201
1210 CLS : PRINT "RUNES TO ENGLI
SH": PRINT '"a  b  c  d  e  f  g
  h  i  j  k 1  2  3  4  5  6  7
  8  9  10 11
            l  m  n  o  p  r  s
  t  u  v   12 13 14 15 16 17 1
9 20 21 22
             w  x  y  z
             23 24 25 26"
1220 PRINT '"{  |  }  [  \  @  %
            27 28 29 30 31 32 3
3 34"
1225 LET A$="abcdefghijklmnopqrs
tuvwxyz{|}[\@% "
1230 LET B$=""
1235 LET C$=""
1240 INPUT "ENTER CODE OF RUNE T
O BE          TRANSLATED (ONE RUNE
 AT A TIME) ENTER 99 TO END INPU
T";C: IF C<1 OR (C>34 AND C<>99)
 THEN GO TO 1240
1250 [illegible] THEN GO TO 1350
1260 IF C<27 THEN LET B$=B$+CHR
$ (C+64))
1270 IF C=34 THEN LET B$=B$+" "
1275 IF C=27 THEN LET B$=B$+"EA"
1280 IF C=28 THEN LET B$=B$+"EE"
1285 IF C=29 THEN LET B$=B$+"NG"
1290 IF C=30 THEN LET B$=B$+"ST"
1295 IF C=31 THEN LET B$=B$+"TH"
1300 IF C=32 THEN LET B$=B$+"@"
1305 IF C=33 THEN LET B$=B$+"%"
1310 IF C=34 THEN LET B$=B$+" "
1320 LET C$=C$+A$(C): GO TO 1240
1350 CLS : PRINT "TRANSLATED"''"M
ESSAGE WAS:-"'C$'"TRANSLATION IS
"'B$
1400 INPUT "PRINT TRANSLATION (Y
 OR N)?";K$: IF K$="" THEN GO TO
 1130
1440 IF K$="Y" THEN LPRINT B$: L
PRINT : LPRINT : LPRINT
1450 GO TO 1000
9999 POKE 23607,60
```

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ADVENTURE HELP



If you need advice or have some to offer write to Tony Bridge, Adventure Help, Micro Adventurer, 12-13 Little Newport St, London WC2R 3LD

ANOTHER month, another cry for help from the Goblin's Dungeon.

This month it is Robert Allsop, from Chellaston, Derby. First of all Robert ensure that you have a friend with you; you will know this already from the HELP that you're given at this location. Now try this: ISNA/DYOT/WO*T/CHAO/RRRI/YNM:/EO*P/GEON/WW

The code here was aired in the March Help column, but to recap, start at the second letter and read off every other letter. When you reach the end, return to the first letter and repeat the process.

Once out of the dungeon, you will find yourself in the dark, winding passage. I hope that the clue will help any of you currently stuck in the Goblin's Dungeon. There is, you'll be pleased to hear, another even tougher one later. Best of luck!

Regular readers will have already seen this clue, as we covered the ground in last month's column. I'm not going to mention the Goblin's Dungeon for at least a couple of months.

The Adventure Contact part of this page always has its fair share of Hobbit problems, as befits what must be one of the greatest adventures.

Last month's was no exception. One of the problems was regarding the pale, bulbous eyes. These are met by everyone playing The Hobbit, and have a rather nasty habit of dropping on you, if given the chance, and stinging you to death — very nasty. Last month, David Blunden was asking how to escape them, and said that not even the magic ring would help. That's not strictly true because you certainly need the ring, but this alone will not be enough. Decode this David: OGNO/,OWN/ACIE/TMTO/WRIE/CIEN/TSHA/EMNE/GDOI/ARGE/ACIT/NI

Darren Cooper wanted to know how to get home from the Dragon's Lair. This is half of the adventure (through I'm not going to hazard a guess at the moment at which is the better half — coming or going), so I won't give anything away here. I hope someone will contact Darren, though this is what the page is all about. Incidentally, I will say that a rather quicker method (which has its own dangers, though) is to allow yourself to be captured by the Woodelf.

Staying with the Spectrum, but in Artic's Planet of Death, Paul King asks: "How do I pick up the flint on the plateau?" Just typing PICK FLINT or TAKE works.

Valhalla is still proving a very popular program. Many letters ask for help in getting started. Most of the problems centre around the fact that the player can often complete the second quest, obtaining Felstrong, before the first, obtaining Ofnir. This is contrary to the manual, which states that quests must be completed in order. Actually, this is the only occasion on where manual order does not apply.

Let's see if we can give some hints on how to obtain Ofnir. It's always a good idea to nab as much food as possible throughout the game, as well as any keys you might come across.

First of all: DG,OA/TNOD/PSLU/AMIM/NOIN/NBMO/ILDO/GIAR/R You will need to follow the second part of the clue because you will not be strong enough to carry out certain chores later. Now: EIRF/EKYR/OAUN/CKAI/NSGSN/OONT/WH

If the first part of the clue is not true, you will not be able to do the second part. Once you've done this: OGKE/OTUY/TOFU/ORRF/KRLI/EEPN/TDOT/-OHO/EPWE/INLT/LHGE/RCAH/BEOS/FTN-/ILRO

You must be prepared to act swiftly at this point, otherwise you could easily lose Ofnir. You'll also need a lot of patience (and all of that food) to get through this part of the game. Once you have Ofnir, other parts of the scenery will be open to you and you can proceed with the adventure. Reread the notes on page 9 of the manual.

ADVENTURE CONTACT

MICRO Spectrum 48K **Adventure** The Hobbit **Problem** How to find the boat; how to get the ring; how to get to laketown? **Name** Stephen Wood **Address** 81 Glenauon Rd, Birkenhead, Merseyside, L43 0RD.

MICRO Spectrum 48K **Adventure** The Hobbit **Problem** How do you avoid being killed by pale, bulbous eyes **Name** B Churchill **Address** 172 Mackenzie Rd, Beckenham, Kent.

MICRO Spectrum 48K **Adventure** The Hobbit **Problem** How do you get: Thrain's key; out of the goblin's dungeon and the dragon? **Name** David Kingdom **Address** 1 Tavern Close, Beetley, Dereham, Norfolk, NR20 4BN.

MICRO Spectrum 48K **Adventure** The Hobbit **Problem** Is it possible to open the portcullis? **Name** June Rowe **Address** 46 Hurdon Way, Launceston, Cornwall.

MICRO Commodore 64 **Adventure** Twin Kingdom Valley **Problem** With what do you kill the dragon in the desert king's castle? **Name** David O'Neill **Address** 15 Brokside Rd, Caton nr Lancaster, Lancs.

MICRO Vic 20 **Adventure** Pirate Cove **Problem** How do you open the chest and how do you get to treasure island? **Name** Andy Stubbs **Address** 95 Denvill Cres, Crossacres, Wythenshawe.

MICRO Vic 20 **Adventure** Curse of the Werewolf **Problem** Can't get past the zombie with the staff but the staff is rarely on my side of the river **Name** Paul King **Address** 122 Balnagasic Circle, Torry, Aberdeen.

MICRO BBC B **Adventure** Castle of Riddles **Problem** How to survive on the boat after the hang glider ride **Name** Graham Francis **Address** 32 Manningford Close, Winchester, Hants.

HAVE YOU BEEN staring at the screen for days, or given up in disgust, stuck in an adventure whose problems seem insurmountable? Adventure Contact may be the answer. This column is designed to put adventurers in touch with one another. When you're stumped a fellow adventurer may be able to help — and you may be able to solve other people's problems. If you are having difficulties with an adventure, fill in this coupon and send it to Adventure Contact, Micro Adventurer, 12/13 Little Newport St, London WC2R 3LD. We will publish Adventure Contact entries each month in this special column.

Micro ....

Adventure ....

Problem ....

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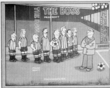
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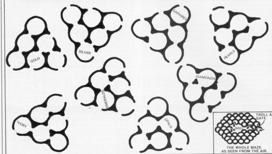
COMPETITION CORNER

Tony Roberts tests your skill — send your answers to Competition Corner, Micro Adventurer, 12-13 Little Newport St, London WC2R 3LD



The best 20 answers we receive will win a copy of Peaksoft's football management simulation. Champions is the name of the game for Dragon 32, BBC B, Electron and Spectrum 48K owners. CBM 64 users have a chance to win the new release The Boss. Let us know which machine you own when you send in your entries.

Reward lies at end of maze



ONCE MORE it is time to risk all that you have gained in the black dungeon working for Tisch.

Tisch has discovered the whereabouts of the third Runic Ring — the C Ring.

As usual through, her knowledge of the hidden ring is restricted but she has mapped out for you these eight sections of the maze.

You have no other information about the maze other than its general shape.

The maze is guarded by a troll, dozing, sitting at the gate. As you sneak in one of the entrances beside the gate, he spots and then chases you.

Can you piece together the fragments of the maze? Clearly they must overlap in some places. Tell us which of the treasures, apart from the ring you have to get for Tisch, you manage to pick up along your quest.

As a tie breaker complete the following sentence in 15 words or less: I want to own a simulation because . . .

Your entry must arrive by the last working day in April. The winners and solution will be published in the June issue. You may enter only once. Entries will not be acknowledged and we cannot enter into correspondence on the result.

February winners

The winners for the February competition were: Michael Douglas, of Cleveland; E Walsh, of Berkshire; N C Parker, of Somerset; John Coadwell, of Cambridge; L Gibson, of Lancashire; Keith Giscombe, of Droitwich; D Linsley, of Newcastle-upon-Tyne; G J Williamson, of Leicester; G Lingam, of West Sussex; A Bowens, of Co Antrim; J R Butler, of Rotherham, W Perry, of Salop; M Noble, of Muswell Hill; P Cockburn, of Cambridge; Julian Murgatroyd, of Warwickshire; G Gibson, of Lancashire.

The solution: 6,2,5,1,3,4.

As you can see there are fewer than the 20 prize winners we promised in the last issue. Could it be because the competition is too hard? Tony Roberts assures us not. Or, could it be that adventure fans won't venture into the land of real competition. Admittedly you only get one life but on the other hand you could win a new game to add to your collection. So let's see what sort of stuff you're made of. Compete against others who share your adventurous nature, and perhaps you'll win a prize. □


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CONFUSED by interminable corridors and limitless caves?
BORED by all the same old adventures?
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